# PETER BENT BRIGHAM HOSPITAL "BOSTON

## SECOND ANNUAL REPORT

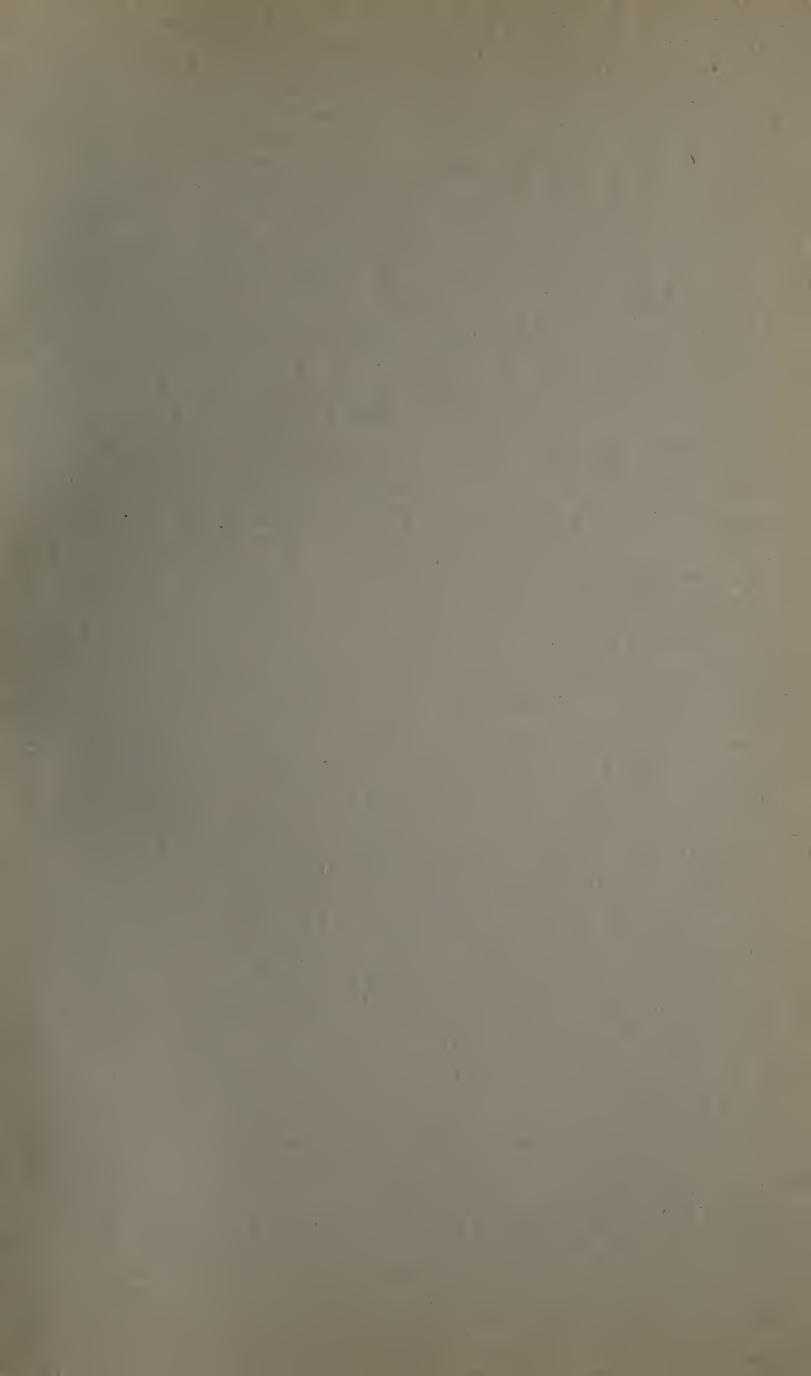
FOR THE YEAR 1915

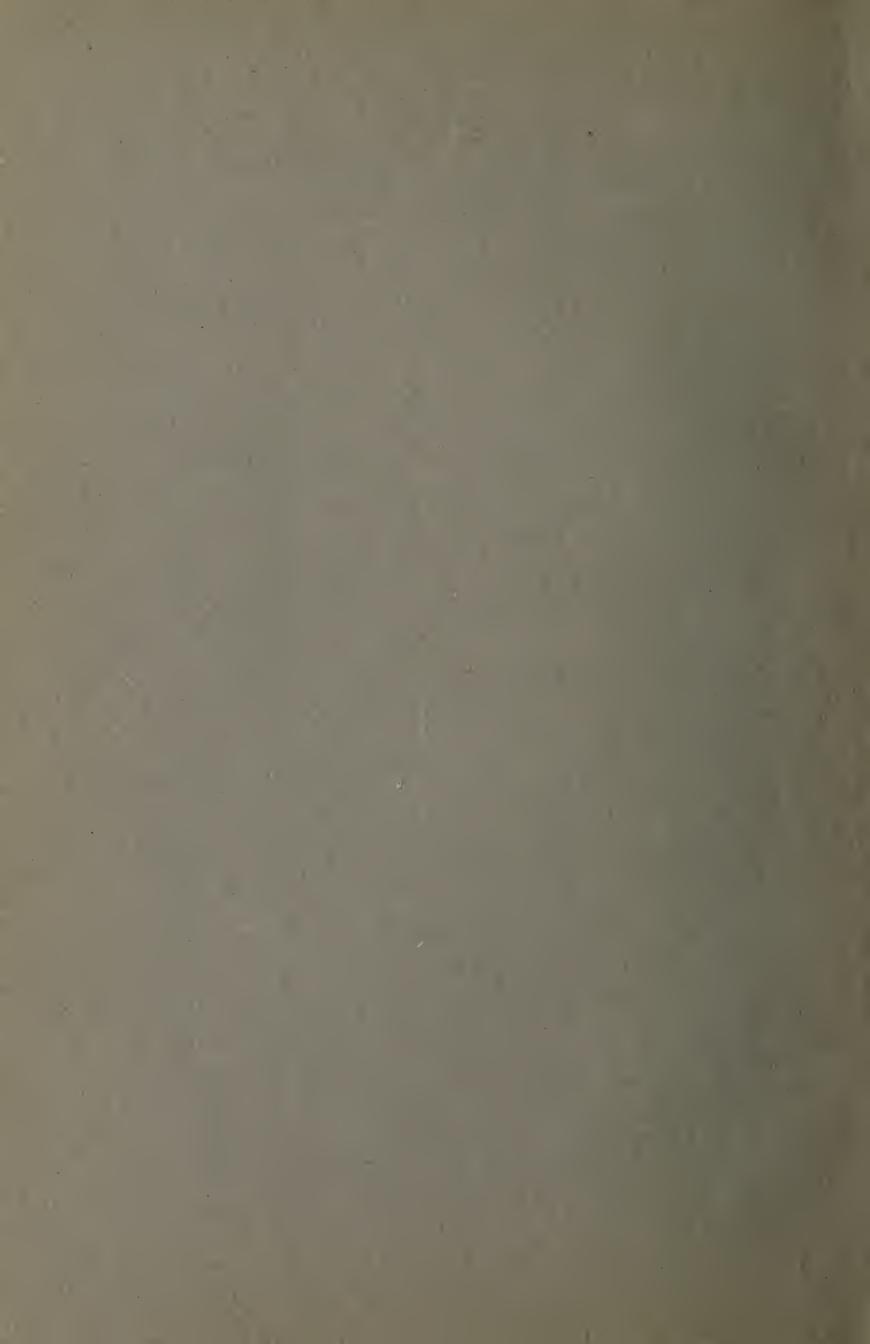
CAMBRIDGE
THE UNIVERSITY PRESS
1916

## FORM OF BEQUEST

I give and bequeath to the Peter Bent Brigham Hospital, a corporation established under the laws of the Commonwealth of Massachusetts, the sum of dollars, the same to be used for the furtherance of its charitable work.







## SECOND ANNUAL REPORT

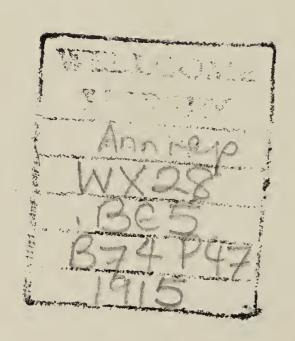
OF THE

# PETER BENT BRIGHAM HOSPITAL

FOR THE YEAR
1915



CAMBRIDGE
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1916



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## Report of the President

MR. ALEXANDER COCHRANE resigned as President of the Board of Trustees on April 8, 1915. He was elected as the hospital's first president in 1902, and held that office throughout the difficulties of its organization. The board realizes the loss of a useful and devoted officer and here recognizes the value of his services. We are glad to record that he continues to act as a member of the Board of Trustees.

Mr. Irvin McD. Garfield was reappointed a member of the board to represent the Commonwealth of Massachusetts.

The board is grateful to Mr. Charles F. Choate, Jr., for giving to the hospital \$5000 a year for three years to be used for a special investigation of bronchial asthma. Progress has been made, but not as yet of such a definite nature that it can be reported.

The hospital was primarily designed and its funds are used to maintain a general hospital, but it is also equipped to profit scientifically by the observation and study of the patients, and it is the hope and purpose of the board and officers, with the aid of the above and similar gifts, to give to the public discoveries of value in the care of the sick. Plans have been made for further scientific work of this character, but as yet funds are lacking to carry them out. On pages 53–55 of this Report will be found a list of publications on scientific subjects written by members of the staff.

The board is grateful to Mr. John P. Reynolds for the gift of a fund in memory of his father, the late Dr. John P. Reynolds, the income of which is to provide annually a gold medal for the graduating nurse showing the great-

est general efficiency in her work. This medal was given this year to Miss Gertrude Mary Gerrard on the occasion of the nurses' graduating exercises.

The following new offices in the staff have been created and the officers appointed during the year:

- March 1, 1915. Associate in Surgery (Eye, Ear, Nose and Throat Cases). Dr. CLIFFORD B. WALKER.
- September 1, 1915. Associate in Medicine (Choate Asthma Fund). Dr. I. Chandler Walker.
- July 1, 1915. Associate in Medicine (Diabetic Cases). Dr. Roger P. Dawson.
- July 1, 1915. Associate in Medicine (Cardiac Cases). Dr. George P. Denny.
- July 1, 1915. Associate in Medicine (Chronic Nephritic Cases). Dr. James P. O'Hare.
- September 1, 1915 to December 9, 1915. Assistant Visiting Physician. Dr. Francis W. Peabody.
- December 9, 1915. Physician, Dr. Francis W. Peabody.

The following changes in the personnel of the staff have been made:

- February 1, 1915. Dr. George H. Stone, formerly at the Boston City Hospital, was appointed Third Assistant Superintendent to fill the vacancy caused by the resignation of Dr. S. Shelton Watkins on January 15, 1915.
- March 1, 1915. Dr. David A. Haller, formerly a Medical House Officer, was appointed Assistant Resident Physician to fill a vacancy due to Dr. I. C. Walker being granted a leave of absence from March 1, 1915, to September 1, 1915.
- September 1, 1915. Dr. Francis G. Blake, formerly Assistant Resident Physician, was appointed Resident Physician to succeed Dr. Francis W. Peabody, appointed Assistant Visiting Physician.
- September 1, 1915. Dr. REGINALD FITZ, Assistant Resident Physician, was granted a leave of absence for one year which he is spending at the Rockefeller Institute Hospital.
- November 1, 1915. Dr. John A. Wentworth, formerly Medical House Officer, was appointed Assistant Resident Physician.

November 1, 1915. Dr. WILLIAM W. CADBURY was appointed Assistant Resident Physician for four months.

September 1, 1915. Dr. Conrad Jacobson, formerly Assistant Resident Surgeon, was appointed Resident Surgeon to fill the vacancy caused by the resignation of Dr. Emil Goetsch.

November 1, 1915. Dr. GILBERT HORRAX, formerly Arthur Tracy Cabot Fellow, in charge of Laboratory of Surgical Research, Harvard Medical School, was appointed Assistant Resident Surgeon to fill the vacancy caused by the resignation of Dr. Edward B. Towne.

April 1, 1915. Dr. Warren E. Sisson resigned his position of

Resident Pathologist.

July 1, 1915. Dr. James L. Stoddard, formerly a Pathological House Officer, was appointed Acting Resident Pathologist from July 1, 1915, to September 1, 1915.

September 1, 1915. Dr. Ernest W. Goodpasture, formerly Acting Resident Pathologist at Johns Hopkins Hospital,

was appointed Resident Pathologist.

The hospital has been glad to give the use of a portion of the Out-Door Department to the Surgical Dressings Committee of the National Civic Federation, Women's Department, New England Section, for their purposes in making surgical bandages to be given to the foreign war hospitals.

During the year the following members and former members of the staff have served in companies of doctors and nurses in the war hospitals in France.

The following are the present members of the staff who went to France during the war:

- Dr. Harvey Cushing, American Ambulance Hospital, Paris, France.
- Dr. David Cheever, 2d Harvard Unit, British Expeditionary Force, France.
- Dr. Walter M. Boothby, American Ambulance Hospital, Paris, France.
- Dr. I. Chandler Walker, In France during leave of absence, March 1, 1915-September 1, 1915.

Former member of staff who went to France during his service here at the hospital as interne:

Dr. Marius N. Smith-Peterson, American Ambulance Hospital, Paris, France.

Former members of the staff who went to France:

Dr. George Benet, American Ambulance Hospital and 2d Harvard Unit.

Dr. Elliott C. Cutler, American Ambulance Hospital.

Dr. William D. Jack, 2d Harvard Unit.

Dr. Edward B. Towne, 2d Harvard Unit.

Former member who served with the American Red Cross in Serbia:

Dr. Henry S. Forbes.

Former member of the staff who served with the McGill General Hospital Overseas Contingent in France:

Dr. Lawrence J. Rhea.

The following nurses have gone abroad for war nursing:

MISS MABELLE S. WELSH, Red Cross Contingent.

Miss Frances B. Latimer, Red Cross Contingent.

Miss Geraldine K. Martin, American Ambulance Hospital, Paris, France.

Miss Jessie A. Clarke, 1st Harvard Unit, British Expeditionary Force, France.

MISS PEARL A. EVERETT, 1st Harvard Unit, British Expeditionary Force, France.

Miss Ada L. B. Shepherd, 1st Harvard Unit, British Expeditionary Force, France.

MISS HANNA S. PETERSON, 2d Harvard Unit, British Expeditionary Force, France.

Miss Anna G. Creeden, 2d Harvard Unit, British Expeditionary Force, France.

Mrs. Catherine Alexander, 2d Harvard Unit, British Expeditionary Force, France.

Dr. Alfred Luger, Roentgenologist, has been in the Austrian army since the beginning of the war.

The board has noted with pleasure that Dr. W. W. Keen, in his Ether Day address this year at the Massachusetts General Hospital, stated that valuable work had been done at the Peter Bent Brigham Hospital in the science of administering anæsthetics.

The Hospital's School of Nursing offers to young women a course of instruction and practice in the science and art of nursing the sick and of the prevention of disease. On December 17, 1915, the first graduation exercises were held, and sixteen pupils received their diplomas.

The Out-Patient Service has increased rapidly during the past year and further improvements have been made for the care and treatment of a much greater number of patients. We thank again the Boston Dispensary for the valuable services of Dr. Henry M. Chase and Dr. Hilbert F. Day who have aided us in the care of our out-patients.

An account of the work done by the hospital during the past year is given in the following reports.

#### CHARLES P. CURTIS,

President.

Note. — The American Ambulance Hospital Unit sailed in March, 1915. The First Harvard Unit sailed in June, 1915. The Second Harvard Unit sailed in November, 1915. The Red Cross Contingent sailed in September, 1914.

## Report of the Treasurer

A statement of receipts of income from investments and of payments therefrom out of the office of the Treasurer for the year ending December 31, 1915, is as follows:

INCOME

INCOME		
Real Estate Receipts:		
Rents	\$137,335.72	
Taxes paid by tenants	38,006.51	
Insurance paid by tenants	1,607.14	
Refunds on insurance	110.81	
Interest on delayed tax	7.14	
Refund on taxes	90.00	\$177,157.32
Interest on Investments:		
On bonds		
On mortgages	8,130.76	
On notes	3,100.01	
	\$58,613.27	
Dividends	24,219.96	
	фод 022 <b>2</b> 2	
I are a compadintenent on bonds	\$82,833.23	92 600 10
Less accrued interest on bonds .	224.13	82,609.10
Bank interest		777.43
Total income		\$260,543.85
Expenditure		
Taxes	49,912.20	
Building repairs	7,225.74	
Insurance	2,467.45	•
Broker's commission on renting	785.38	
Insurance refunded to tenant	35.73	
insurance refunded to tenant	33.73	
Total real estate expense .	\$60,426.50	

#### REPORT OF THE TREASURER

Salaries	•	
Legal expenses	775.00	
Audit	288.15	
Safe deposit box	70.00	
Appraising securities	25.00	
Total expenditure	\$69,384.65	
Bond premiums amortized		
Net income available for operat-		
ing expense		\$190,425.82
Net payments for operating expense,		
as shown by Superintendent's	402 244 00	
statement appended	3182,261.99	
Difference between Superintendent's	4 500 05	102 770 04
payments and Treasurer's refunds.	1,508.25	183,770.24
Balance carried to reserved income.		\$6,655.58
Schedule of Prope	rpwy	
•		
Land and buildings occupied for Hospita	al, includ-	
Land and buildings occupied for Hospita	•	1,777,641.41
ing furniture and fixtures	\$	
	\$	
ing furniture and fixtures		
ing furniture and fixtures	Aug. 31,	188,894.12
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%	Aug. 31,	
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due	Aug. 31, April 1,	188,894.12
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due  1919, 5%	Aug. 31, April 1,	8,000.00
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due  1919, 5%  Land and buildings, 63 Blackstone Street	Aug. 31, April 1,	8,000.00 40,000.00
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due  1919, 5%  Land and buildings, 63 Blackstone Street  Land and buildings, 166–210 Portland Street	Aug. 31, April 1, et	188,894.12 8,000.00 40,000.00 59,437.53
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due  1919, 5%  Land and buildings, 63 Blackstone Street  Land and buildings, 166–210 Portland Stand and buildings, 5–11 Tremont Row	Aug. 31, April 1, et	8,000.00 40,000.00 59,437.53 674,780.39
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due  1919, 5%  Land and buildings, 63 Blackstone Street  Land and buildings, 166–210 Portland Stand and buildings, 5–11 Tremont Row  Land and buildings, 224–230 Congress	Aug. 31, April 1, et	8,000.00 40,000.00 59,437.53 674,780.39 473,129.45
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due  1919, 5%  Land and buildings, 63 Blackstone Street  Land and buildings, 166–210 Portland Stand and buildings, 5–11 Tremont Row	Aug. 31, April 1, et	8,000.00 40,000.00 59,437.53 674,780.39 473,129.45 99,162.92
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due  1919, 5%  Land and buildings, 63 Blackstone Street  Land and buildings, 166–210 Portland Street  Land and buildings, 5–11 Tremont Row  Land and buildings, 224–230 Congress  Land and buildings, 108–114 Lincoln St	Aug. 31, April 1, et Street Street reet	8,000.00 40,000.00 59,437.53 674,780.39 473,129.45 99,162.92 159,477.39
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due  1919, 5%  Land and buildings, 63 Blackstone Street  Land and buildings, 166–210 Portland Street  Land and buildings, 5–11 Tremont Row  Land and buildings, 224–230 Congress  Land and buildings, 108–114 Lincoln St  Land and buildings, 223–225 Washington	Aug. 31, April 1, et Street reet reet	8,000.00 40,000.00 59,437.53 674,780.39 473,129.45 99,162.92 159,477.39 220,000.00
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due  1919, 5%  Land and buildings, 63 Blackstone Street  Land and buildings, 166–210 Portland Street  Land and buildings, 5–11 Tremont Row  Land and buildings, 224–230 Congress  Land and buildings, 108–114 Lincoln Street  Land and buildings, 223–225 Washington  Land and buildings, 91–95 Portland Street  Land and buildings, 91–95 Portland Street	Aug. 31, April 1, Street reet reet Street Street	8,000.00  40,000.00  59,437.53 674,780.39 473,129.45 99,162.92 159,477.39 220,000.00 75,957.25
ing furniture and fixtures  Mortgages  Notes:  Boston & Maine R. R. Co., due  1916, 6%  Maine Railways Companies, due  1919, 5%  Land and buildings, 63 Blackstone Street  Land and buildings, 166–210 Portland Street  Land and buildings, 5–11 Tremont Row  Land and buildings, 224–230 Congress  Land and buildings, 108–114 Lincoln Street  Land and buildings, 223–225 Washington  Land and buildings, 91–95 Portland Street  Land and buildings, 91–95 Portland Street  Land and buildings, 67–69 Commercial	Aug. 31, April 1, et Street reet Street Street Street Street	8,000.00  40,000.00  59,437.53  674,780.39  473,129.45  99,162.92  159,477.39  220,000.00  75,957.25  74,363.01

Amount brought forward	\$4,000,496.65
Land and buildings, 148-150 Hanover Street	60,787.78
Land and buildings, 1-7 Sudbury Street	69,994.95
Land and buildings, 88-92 Court Street	171,417.80
Land and buildings, 94-98 Arch and 13-17 Otis	•
Streets	165,755.91
Land cor. Albany & Dover Streets	110,221.90
1000 Shares Fitchburg R. R. Co., preferred	142,000.00
100 Shares Boston & Albany R. R. Co	25,800.00
524 Shares Vermont & Mass. R. R. Co	91,700.00
450 Shares Old Colony R. R. Co	93,150.00
183 Shares Nashua & Acton & Boston R. R. Co.	183.00
200 Shares State Street Exchange	21,760.00
400 Shares Boston Wharf Company	37,585.25
50 Shares Boston Real Estate Trust	58,514.25
30 Shares Constitution Wharf Trust	3,330.00
150 Shares Hotel Trust (Touraine)	15,900.00
100 Shares South Terminal Trust	10,300.00
15 Shares National Union Bank	2,700.00
100 Shares Newport & Fall River St. R'way Co.	13,278.33
1000 Shares Berkeley Hotel Trust	65,000.00
1500 Shares New York, New Haven & Hartford	•
R. R. Co	225,545.33
200 Shares N. Y. Central & H. River R. R. Co	21,025.00
100 Shares Chicago, Mil. & St. Paul R. R. Co	14,760.70
220 Shares Pennsylvania R. R. Co	11,731.88
\$150,000 American Tel. & Tel. Co. 4% bonds, 1929	139,887.50
25,000 Quincy Market Realty Co. 5% bonds,	•
1964	
60,000 Portland & Ogdensburg R. R. $4\frac{1}{2}\%$	•
bonds, 1928	61,047.37
5,000 Kansas City & Memphis Ry. & Bridge	•
Co. 5% bonds, 1929	5,103.33
100,000 Chicago, Burl. & Quincy R. R., Ill. Div.	•
$3\frac{1}{2}\%$ bonds, $1949$	89,077.50
20,000 Washington Water Power Co. 5% bonds,	· ·
1939	
50,000 Boston & Maine R. R. 4½% bonds, 1929	•
50,000 Burlington, Cedar Rapids & Northern	
5% bonds, 1934	54,909.21
Amount carried forward	\$5,879,893.20

#### REPORT OF THE TREASURER

Amount brought forward	\$5,879,893.20
25,000 Baltimore & Ohio R. R. Co., So. West	
Div. $3\frac{1}{2}\%$ bonds, 1925	22,125.00
25,000 N. Y. Central & Hudson River R. R. Debs. 4% bonds, 1934	23,937.50
50,000 Cleveland, Lorain & Wheeling R. R. 5%	20,901.00
bonds, 1933	54,462.85
25,000 N. Y. Central & H. River R. R. Co. 1st	
mtge. $3\frac{1}{2}\%$ bonds, $1997$	21,875.00
25,000 Northern Pacific R. R. Co., Prior Lien	24,781.25
4% bonds, 1997	24,781.23
50,000 Old Colony St. Railway Co. 4% bonds,	21,.100
1954	43,250.00
75,000 Chicago & North Western Railway Co.	
$4\%$ bonds, $1926 \dots \dots \dots \dots \dots$	72,750.00
28,000 General Electric Co. 3½% bonds, 1942	23,170.00
50,000 Chicago & West Michigan R. R. Co. 5%	20,170.00
bonds, 1921	49,420.00
3,000 Pennsylvania R. R. 4% bonds, 1948	2,880.00
50,000 Atchison, Topeka & St. Fe R. R. Trans-	45 500 00
continental Short Line, 4% Bonds, 1958	47,500.00
50,000 Illinois Steel Co. $4\frac{1}{2}\%$ bonds, 1940 50,000 Boston & Albany R. R. Co. Equip. $4\frac{1}{2}\%$	47,375.00
bonds, 1920	49,725.00
15,000 Boston & Albany R. R. Co. Equip. 4½%	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,
bonds, 1924	14,893.50
15,000 Boston & Albany R. R. Co. Equip, 4½%	44.006.00
bonds, 1925	14,886.00
bonds, 1926	4,960.00
15,000 Boston & Albany R. R. Co. Equip. 4½%	1,700.00
bonds, 1927	14,875.50
50,000 Interborough Rapid Transit Co. $5%$	
bonds, 1966	49,500.00
50,000 Kansas City Stock Yards, 5% bonds, 1920 Cash: Operating Expense Fund \$20,000.00	50,000.00
Superintendent's Fund	
Cash in banks	80,624.93
Amount carried forward	\$6,617,603.48

Amount brought forward . . . . . . \$6,617,603.48

Included in the above Schedule of Property are the following special funds:

CHOATE FUND . . . . . \$5,000.00
Less amounts expended . 1,076.29 \$3,923.71

JOHN P. REYNOLDS MEMORIAL FUND 1,000.00 4,923.71

\$6,612,679.77

EDMUND D. CODMAN,

Treasurer.

## Report of the Superintendent

This is the second annual report of the Peter Bent Brigham Hospital and covers the work of the year 1915. From the figures it contains it will be seen that the hospital is steadily increasing its activities, as each department shows a decided broadening of its usefulness.

During the year there have been admitted into the wards of the hospital 3417 patients and there have been 8536 new patients treated in the Out-Door Department, so that one can reasonably say that upwards of 10,000 patients have directly received the benefit of treatment at this hospital during the year. In addition to this it may be noted that the X-ray Department made 4572 examinations; that there have been over 2229 examinations made in the serologic laboratory and 750 studies in the respiration laboratory. Over 7000 days of scientifically prepared special diets have been served under the direction of the dietitian. There have been 563 ambulance calls.

The total operating expenses for the year have been \$269,913.46 and the receipts from patients have amounted to \$88,651.55. The corresponding figures for 1914 were \$256,423.25 and \$69,251.23. The increase in the prices paid for drugs, chemicals, apparatus, provisions and labor have added materially to the current expenses. Furthermore, it must be borne in mind that the examination and care of a patient under modern conditions is a very complicated procedure and this must be considered when the apparently large item for running expenses is noted. Moreover, it must be remembered that there is a large amount of research work being carried on which always requires a large expenditure of funds.

During the summer and autumn there has been erected and put into use an amphitheater which has a seating capacity for 189 persons. This is centrally located and is proving most satisfactory as a clinical amphitheater and auditorium. On December 17 the first class, consisting of sixteen pupils from the Training School for Nurses, was graduated in this auditorium. The library and record room have been installed on the ground floor of this building.

During the year, also, plans were drawn up and work started for finishing off the second floor of the Out-Door Building for clinical purposes. The work is now well advanced and it is expected that the medical division of the Out-Door Department will soon be located there.

Permission was granted to the Surgical Dressings Committee of the Woman's Department of the National Civic Federation to use the Zander room of the Out-Door Building for the purpose of preparing surgical dressings for the war sufferers of Europe. This work has gone steadily forward during the latter part of the year under the able direction of the committee. This is one of the means by which the good name of the hospital is being disseminated over an ever widening area.

During the year, with the consent of the Trustees, a number of regulations intimately affecting the patients have been put in force. It is always a problem how to instruct the public in regard to any new institution and the methods by which it can be made to render the greatest service. It is gratifying to think that the public of the city of Boston is coming to realize the aims and purposes of this hospital and to make every possible use of it. In the long run the public is sympathetic toward an institution which is completely coördinated in all its departments and reasonably regulated in its management. Accordingly, these aims have been striven for and it has been found true that in general those who come in con-

#### REPORT OF THE SUPERINTENDENT

tact with the hospital soon come to value the regulations just as those responsible for its management first saw their importance. In this way the cooperation of the public is gained in sustaining the principles which further the smooth running of the institution.

In 1910, at a meeting of the American Hospital Association, I presented the following plea for an inspector of general hospitals appointed by each state:

"We have at present nearly as many standards as there are general hospitals. The standard is usually what the tired and overworked superintendent makes it.

"State institutions for the insane rise to a much higher standard in regard to certain things than our general hospitals do. I believe that the sole reason for this is the inspection of these institutions by the state officials, and I believe nothing would so rapidly raise the standard of our general hospitals throughout the country as for each state to appoint an inspector whose duty it should be to inspect every hospital that admits charity cases to its wards, an inspector who knows enough to inspect properly and one who has courage enough to publish in his report the weaknesses as well as the strength of each institution.

"An unwelcome truth, published, is not a pleasant thing at the time, but it is a very effective method of bringing about the strengthening of the weaker parts.

"Canada has this inspection of its general hospitals for the same reason that our hospitals for the insane are inspected in the states.

"I hereby recommend that we have it as a means for improvement. That we may have it so that the trustees of an institution may know through an expert where their hospital grades and not be allowed to drift along in their ignorance, patting themselves on the back and believing that each has the best in the country."

Dr. Frederic A. Washburn two years later made a similar recommendation to the Association. The Hospital Section of the American Medical Association took this matter up at its meeting in Minneapolis. At that time

it was felt that the Sage Foundation could be induced to assume this responsibility. During the past year, matters have been shaping up so that it seems probable that the American Medical Association will assume the whole burden of inspecting the general hospitals of the country.

In the following pages you will find the usual tables of statistics, also the reports of the Superintendent of Nurses, the head of the Social Service Department, the Pathologist, the Surgeon-in-Chief, and the Physician-in-Chief.

I wish to express our thanks to the clergymen who have so kindly officiated during the year.

HERBERT B. HOWARD,

Superintendent.

Table I

## Comparative Statement of Statistics

## HOSPITAL WARDS AND SINGLE ROOMS

Patients in hospital first of year:	1915	1914
Medical	59	58
Surgical	86	61
Total	145	119
Patients admitted during the year:		
Medical	1,734	1,391
Surgical	1,683	1,452
Total	3,417	2,843
Patients treated in hospital wards and		
private rooms during the year:	1,793	1,449
Medical	1,769	1,513
buigicai	1,709	1,515
Total	3,562	2,962
Patients discharged during the year:		
Well	1,082	887
Improved	1,573	1,164
Unimproved	249	304
Untreated	281	290
Died	210	172
Total	3,395	2,817
Patients in hospital end of year:		
Medical	78	59
Surgical	89	86
Total	167	145

Total patients days treatment:	1915	1914
Paying patients	19,942)	21 (07
Part paying patients	16,582	31,627
Free patients	23,718	17,668
Total	60,242	49,295
Percentage:		
Paying patients	33+)	C A 1
Part paying patients	28-	64+
Free patients	39+	36—
Total	100	<u>i00</u>
Average patients per day:		
Paying patients	55-	87+
Part paying patients	45+	
Free patients	65—	48+
Total	165+	135+
Average time per patient in hospital 18 Daily average cost per patient	· ·	
Daily cost per capita for provisions for	$\rho$ 4.40 —	φυ.15-
all persons supported	.29—	.35—
Patients were admitted as follows:		
Paying \$14.00 or more	1,609	1,221
Paying less than \$14.00	712	722
Free	1,096	900
	3,417	2,843
	ŕ	2,010
Out-Door Departmen	NT	
Number of cases treated (new cases) .	8,536	8,347
Medical	4,441	4,322
Surgical	4,095	4,025
Number of visits	36,523	30,434
Medical	15,396 21,127	13,416 17,018
Surgical	21,127	17,010

## REPORT OF THE SUPERINTENDENT

Patients arrived:	1915	914
А.м. 8–10	9,776 7,	784
10–12	9,130 7,	472
р.м. 12-2	5,586 4,	004
2–3	6,037 4,	973
3–4	3,918 4,	263
4-6	2,074 1,	928
6-8		8
8–10		2
10–12	^	
Cost of Maintenance of Out Door Do	36,523 30,	,434
Cost of Maintenance of Out-Door De-	2 108 20 \$10 08	1 30
partment	2,108.39  \$10,08	1.55 22.1
Daily average cost per patient	.00 —	)
Ambulance		
Ambulance calls during the year	563	533
Average calls per day		16+
Mileage for patients	3,423 3	,186
Other business	1,636	,603
Total mileage		,789
X-Ray		
1915 191	4 1915	1914
No. of Patien	ts No. of Pl	ates
January 396 23	14 767	474
	40 685	465
·	780	577
	67 683	583
±	79 630	679
·	56 710	556
	32 629	703
August	98 678	644
	02 639	613
<u>*</u>	73 725	591
	39 850	788
	74 943	746
Total	71 8,719	7,419

## Table II

# Residences

	1915	1914
Alabama	4	5
Arizona	1	
California	3	5
Colorado	1	2
Connecticut	9	14
District of Columbia	3	1
Florida	• •	3
Georgia	3	2
Idaho		2
Indiana	4	1
Illinois	4	1
Iowa	4	4
Kansas	3	4
Kentucky	1	3
Maine	31	30
Maryland	3	1
Massachusetts (except Boston)	862	706
Boston	2,247	1,826
Michigan	6	5
Minnesota	5	2.
Missouri	5	3
Montana	1	
Nebraska	• •	3
New Hampshire	41	39
New Jersey	5	4
New York	57	49
North Carolina	1	5
North Dakota	1	
Ohio	11	14
Oklahoma	2	4
Oregon	1	
Pennsylvania	10	7
Carried forward	3,329	2,745

#### REPORT OF THE SUPERINTENDENT

														1915	1914
$Brou_{i}$	gh	t f	or	wa	rd		•	•		•		•	٠	3,329	2,745
Rhode Island														30	30
South Carolina														1	5
Tennessee .														2	2
Texas														6	13
Utah														1	
Vermont														12	9
Virginia . *.														1	1
Washington														7	10
West Virginia														3	5
Wisconsin .														4	4
Canada														21	17
Panama															2
Total .		•	•		٠	•			•		•			3,417	2,843

## Table III

# Birthplaces

	1915	1914
Alabama	6	5
Arkansas	2	1
California	17	11
Colorado	3	
Connecticut	37	27
Delaware	2	1
District of Columbia	4	6
Florida	4	3
Georgia	8	4
Idaho	1	3
Illinois	14	16
Indiana	7	2
Iowa	5	13
Kansas	3	6
Kentucky	7	5
Louisiana	2	4
Maine	140	98
Maryland	16	8
Massachusetts (except Boston)	757	876
Boston	463	165
Michigan	7	4
Minnesota	7	4
Missouri	6	` 3
Nebraska	3	4
New Hampshire	78	56
New Jersey	16	12
New Mexico	3	
New York	125	94
North Carolina	12	17
North Dakota	1	
Ohio	21	21
Oklahoma	2	2
Carried forward	1,779	1,471

## REPORT OF THE SUPERINTENDENT

$Brought\ forward\ .\ .\ .\ .\ .\ .$	1915 . 1,779	1914 1,471
Oregon	· · · · · · · · · · · · · · · · · · ·	1
Pennsylvania	. 33	15
Rhode Island	. 41	13
South Carolina		10
Tennessee		6
Texas		6
Utah		1
Vermont		41
Virginia		24
West Virginia		3
Wisconsin		13
Wyoming		1
vy similar in the second secon		
Total Americans	. 1,947	1,605
Africa		1
Argentina		-
Australia	_	2
Austria	• •	26
Belgium		6
Bulgaria		1
	- · ·	226
Canada	. 2	1
Denmark	. 6	6
East Indies		1
England	. 141	113
France	. 4	4
Germany	. 61	52
Greece	42	24
Holland	. 5	3
Hungary	. 4	
Ireland	. 273	281
Italy	. 85	100
Norway	. 23	6
Panama	. 20	1
Poland		4
Portugal	. 8	
Roumania	. 4	3
Carried forward	. 1,007	861

	1915	1914
Brought forward	1,007	861
Russia	333	274
Scotland	28	27
Spain	7	1
Sweden	40	29
Switzerland		3
Tasmania		1
Turkey	52	33
Venezuela		1
Wales	2	1
West Indies	1	7
Total foreigners	1,470	1,238

## Table IV

# Occupations

MALES	1915	1914
Accountants	1	6
Actor	1	
Agents	18	3
Architects	2	1
Artists		2
Attendants	2	• •
Bakers	17	12
Bankers	2	4
Barbers	27	19
Bartenders	6	2
Blacksmiths	6	7
Boiler Makers	3	
Bookbinders	9	2
Bookkeepers	15	2
Bootblacks	• •	3
Box makers	9- • •	4
Brewery employees		3
Bricklayers	5	4
Brokers	13	18
Builders	4	
Butchers	5	5
Butlers	2	1
Cabinet maker	1	• •
Candy makers	3	2
Carpenters	42	31
Cashiers	2	
Chauffeurs	27	13
Chemist	1	
Cigar dealer		1
Cigar makers	7	9
Civil Engineers	5	• •
Cleaners	5	14
Carried forward	231	168

MALES	1915	1914
Brought forward	231	168
Clergymen	9	6
Clerks	. 132	66
Coal dealer		1
Cobblers	3	2
Confectioners	1	1
Contractors	4	2
Cooks	27	5
Coopers	2	2
Dentists	3	3
Draughtsmen	5	1
Drivers	9	8
Druggists	3	1
Dyer		1
Editors	2	1
Electrical Engineers	4	1
Electricians	14	12
Elevator Men	6	12
	16	10
Engineers	16	26
Firemen	13	14
Firemen	3	3
Fishermen	3 1	1
	11	10
Foremen		10
Fruit dealers	2	• •
Furniture dealer	1	• •
Furniture makers		3
Furniture movers	2	2
Furriers	1	1 7
Gardeners	1	/
Gas fitters		3
Grocers	6	5
Hardware dealer		1
Harness makers	4	6
Hostlers		3
Hotel proprietors	1	1
Housemen	• •	20
Icemen	1	2
Inspector of wires		1
Carried forward	540	399

## REPORT OF THE SUPERINTENDENT

MALES	1915	1914
Brought forward	540	399
Inspectors	9	
Insurance agents		11
Interpreter		1
Inventors		1
Janitors	37	14
Jewelers	6	1
Journalist		1
Junk dealers	2	3
Laboratory employees	1	17
Laborers	100	143
Laundrymen	3	4
Lawyers	12	13
Leather workers	3	3
Letter carriers	4	2
Librarian	1	
Liquor dealers	1	2
Longshoremen	5	1
Lumbermen	1	1
Machinist	26	37
Mail clerk		1
Managers	4	19
Manufacturers	3	7
Marketmen	4	1
Masons	1	5
Meat cutters	5	5
Mechanics		7
Mechanical engineers	2	2
Merchants	25	20
Messengers	13	18
Metal workers	10	8
Milk dealers	2	1
Mill hands	14	12
Miners	4	1
Minors	33	48
Missionaries	1	4
Musicians	2	9
Music teacher	1	
Naval officer	1	1
Travar Officer	• •	1
Carried forward	875	823

MALES	1915	1914
Brought forward	875	823
Newsboys		2
No occupation	39	15
Nurse	1	
Office boys		3
Orderlies	13	4
Painters	31	36
Paper hangers		3
Peddlers	17	7
Photographers	2	2
Physicians	49	35
Plasterers	2	1
Plumbers	30	19
Police officers	10	29
Porters	9	7
Printers	12	11
Produce dealers		2
Professors	1	3
Provision dealers	3	
Rabbis	2	4
	3	
Rag men	18	21
Railroad employees	10	2
Ranchers	5	7
Real estate	5 4.	2
Restaurant keepers	15	31
	2	31
Roofers.	3	3
Rubber workers		**
Salesmen	88	62
Sawmill		2 5
Seamen	2	5
Secretaries	3	1.0
Shippers	14	10
Shoemakers	15	14
Shoe shop employees	29	27
Silversmith		1
Social workers		11
Stationary engineers	5	2
Stevedore		1
Carried forward	1,305	1,208

## REPORT OF THE SUPERINTENDENT

MALES	1915	1914
Brought forward	1.305	1,208
Stewards	8	1
Stone cutters	2	
Stone masons		2
Storekeepers		2
Street railway employees	25	15
Structural iron workers	1	1
Students	190	150
Superintendents	11	19
Surveyor	1	
Tailors	47	42
Teachers	12	8
Teamsters	32	35
Telegraph operators	1	2
Telephone operators	2	1
Time keeper		1
Tinsmiths	9	2
Treasurers	3	
Trustees	2	1
Typist		1
Undertaker		1
Valet		1
Veterinary surgeon		1
Waiters	28	17
Watchmakers	2	1
Watchmen	6	1
Wheelwrights	2	
Woodworker		1
Others	150	91
	100	<i></i>
Total males	1,839	1,605
	·	·
FEMALES	1915	1914
Actresses	2	
Artists	2	
Authors	1	3
Bookbinders	2	
Bookkeepers	15	9
Bundle girl		1
	the same of the sa	
Carried forward	22	13

FEMALES	1915	1914
Brought forward	22	13
Candy makers	7	2
Canvassers	1	
Cashiers	3	7
Chemist	1	
Cigar maker		1
Cleaners	5	7
Clerks	28	8
Cooks	11	6
Demonstrators	1	1
Designer		1
Dietitian		1
Domestics	181	147
Dressmakers	15	8
Governess	1	
Hair dresser		1
Home	383	353
Housewives	434	375
Laundry maids	24	7
Librarians		2
Matron	1	
Merchants	2	
Mill operatives	5	12
Milliners	5	2
Minors	24	21
Missionaries	1	3
Musicians	1	1
Music teachers	3	1
No occupations	32	4
Nurses	71	46
Physicians	3	3
Proofreader		1
Saleswomen	18	10
Seamstresses	13	14
Secretaries	2	
Shoe shop employees	6	6
Social workers	3	1
Soda fountain employees		9
Solicitors		2
Carried forward	1,307	1,076

## REPORT OF THE SUPERINTENDENT

FEMALES	1915	1914
Brought forward	1,307	1,076
Stenographers	28	8
Students	135	100
Tailoresses	2	2
Teachers	22	24
Telephone operators	15	2
Typists	2	1
Waitresses	34	14
Others	33	11
Total females	1,578	1,238

# Table V

# Expense and Revenue Statement

#### Administration Expenses

	1915		1914	
Salaries, officers, and clerks .	\$20,203.88		\$19,301.20	
Office expenses			.29	
Stationery, printing, and post-				
age			2,408.94	
Telephone and telegraph			2,149.70	
Liability insurance			627.68	
Miscellaneous	3,306.50		2,594.70	
Total administration				
expenses		\$29,029.09		\$27,082.51
Person	IAL CARE O	F PATIENTS		
Salaries and wages:				
Physicians and surgeons	\$19,124.97		\$18,912.51	
Supt. of nurses and assistants			3,998.12	
Nurses			12,145.02	
Special nurses			7,793.97	
Orderlies			5,099.59	
Druggists			1,637.84	
Ward employees			2,711.58	
Record clerks	4,603.78		3,874.83	
		\$59,866.80		\$56,173.46
Training school:				
Salaries of instructors	\$2,328.20		\$2,182.50	
Supplies	1,483.36		488.44	
		3,811.56		2,670.94
Medical and surgical supplies:				
Apparatus and instruments.	· · · · · · · · · · · · · · · · · · ·		\$1,728.04	
Medical and surgical supplies			12,852.79	
Alcohol, liquors, and wines.	428.15		415.11	
		16,483.35		14,995.94
Out-Door Department:				
Labor	\$3,436.33		\$2,637.85	
Supplies	2,717.04		940.43	
·		6,153.37		3,578.28
	30			

# REPORT OF THE SUPERINTENDENT

Photography and X-ray: Salaries and labor Supplies	\$3,564.55		<b>1914</b> \$4,173.06 5,437.90	
		\$10,903.74		\$9,610.96
Medical library		980.72		771.17
Equipment for nurses				38.36
Refunded on board		• •		339.95
Total professional care of				
patients		\$98,199.54		\$88,179.06
Der	ARTMENT E	Expenses		
Ambulance:				
Labor	\$1,655.00		\$871.11	
Supplies	643.21		358.39	
		\$2,298.21	· · · · · · · · · · · · · · · · · · ·	\$1,229.50
Laboratories:				
Labor	\$6,013.60		\$6,399.88	
Supplies			2,529.65	
		9,367.77		8,929.53
Housekeeping:				
Labor	\$14,216.00		\$14,648.65	
Supplies			5,918.68	
•		20,801.42	•	
Kitchen:		•		ŕ
Labor	\$6,224.43		\$5,567.04	
Supplies			195.65	
r r		6,410.53		5,762.69
Laundry:		,		,
Labor	\$4.485.77		\$4,663.50	
Supplies	990.81		762.32	
zappilos		5,476.58		5,425.82
Steward's department:		0,170,00		0,120.02
Labor	¢1 573 06		\$1,241.55	
Provisions:	Ψ1,575.50		Ψ1,241.00	
Bread	2,259.72		1,944.61	
Milk and cream	8,763.57		9,632.51	
Groceries	5,512.67		7,225.03	
Butter and eggs			7,223.03	
Fruit and vegetables	·		5,047.67	
Meat, poultry, and fish .	•		16,212.71	
ivicat, pourtry, and fish.	10,104.10	47,766.92		49,253.01
		11,100.92		±2,200.01
Total department expenses	3	\$92,121.43		\$91,167.88

## GENERAL HOUSE AND PROPERTY EXPENSES

Electrical department	\$2,500.58		\$2,602.9	1
Heat, light, and power			30,000.00	
Fuel and oil	•		·	
Gas			2,065.6	4
Ice			4.6.	5
Water	1,985.80		1,734.00	C
Maintenance real estate and				
buildings	8,983.13		9,087.8	0
Maintenance machinery and				
tools	246.86		86.2	5
Plumbing and steam fitting .	4,740.54		3,367.02	2
Insurance			1,045.5	3
Total general house and				-
property expenses		\$50 563 40		\$49,993.80
property expenses	• • • •	Ψυυ,υυυ.πυ		Ψ±2,220.00
Expense	s from Sp	ecial Fun	DS	
		04.054.00		
Asthma Fund	• • • •	\$1,076.29		
Corr	oration I	Typenere		
	ORATION 1	DAPENSES		
Salaries, officers, and clerks .				
Stationery, printing, and				
postage				
Legal expenses				
Taxes			Φ4 O44 77	
Medical adviser	\$1,008.08		\$1,041.72	2
Miscellaneous				_
Total corporation expenses		\$1,000.08		\$1,041.72
	,			
	SUMMA	ARY	•	
	Expens	FS		
	LAILNO	130	1915	1914
Total administration expenses			\$29,029.09	\$27,082.51
Total professional care of patien				88,179.06
Total department expenses	_		92,121.43	*
Total general house and propert			*	49,593.80
Total general house and propert	y capenaca	• • • • •	50,505.40	47,773.00
Total hospital expenses .			\$269,913.46	\$256,423.25
Corporation expenses			1,000.08	1,041.72
			\$270,913.54	\$257.464.07
			·	φ237,40%.97
Choate fund expenses			1,076.29	
GRAND TOTAL			\$271,989.83	\$257,464.97
	20			, ,

## REPORT OF THE SUPERINTENDENT

## REVENUE

	1915		1914
Administration receipts	\$1,279.90		\$1,370.94
Professional care of patients receipts:	•		
Board of priv. rm. patients \$24,699.93		\$18,714.75	5
Board of ward patients . 35,512.13		29,305.61	L
Special nurses 12,534.05		9,123.38	3
Out-Door Department . 6,449.33		3,761.59	
Photography and X-ray . 4,189.87		3,296.05	5
Miscellaneous 2,432.99		2,138.37	7
***************************************	85,818.30	<u></u>	- 66,339.75
Department receipts:			
Ambulance \$794.62		\$877.00	)
Miscellaneous 719.58		636.95	5
	1,514.20		- 1,513.95
General house and property receipts .	39.15		26.59
Total hospital receipts	\$88,651.55		\$69,251.23
rent expenses \$150,351.78		\$155,498.81	
Bills paid by treasurer 31,910.21		32,714.93	3
\$182,261.99		\$188,213.74	- !
Cash from treasurer for ex-			
penses from Choate Fund 1,076.29	183,338.28		188,213.74
GRAND TOTAL	\$271,989.83		\$257,464.97
Statement of S	TOCK ON I	Hand	
		1915	1914
Administration aunalies		\$3,085.30	\$1,094.40
Administration supplies	·	•	
Professional care of patients sup	pnes .	7,196.09	6,292.45
Department supplies		8,802.69	10,410.69
General house and property supp	olies .	3,048.70	1,841.48
•	\$2	22,132.78	\$19,639.02

# Report of the School of Nursing

THE work of the School of Nursing has been continued along the same lines as outlined in the report of last year.

Five hundred and forty-nine letters of inquiry and personal calls have been received concerning admission to the school. Forty-two pupils have been admitted to the preliminary course. Seventeen of these have been accepted into the school. Eight were not accepted. Seventeen are still serving their probationary term.

The increasing number of applications and the length of the waiting list would seem to indicate that the young women who are considering entrance into the field of nursing are discriminating in favor of those schools that have improved living and housing conditions and well-planned curricula.

A number of important changes have been made in our graduate nursing staff. During the year the need of nurses for war duty has made heavy inroads upon it. Since October, 1914, nine nurses of our staff have gone to Europe—two with the first Red Cross contingent, the others with the various Harvard units. These nurses were supervisors, instructors and head nurses. Two returned on completing their terms of service. Emmeline K. Mills, R.N., has succeeded Miss Clarke as instructor of practice, and Annie L. Sime, R.N., has succeeded Miss Peterson as night supervisor—both these positions having been made vacant by the exodus of nurses to Europe. The close of the year marks the time when the school has grown to such size that it is able to carry the bulk of the nursing work of the hospital.

Increased affiliations to meet the growth of the school have been made during the year.

#### REPORT OF THE SCHOOL OF NURSING

Twelve pupils have profited by an affiliation with the Children's Hospital for periods of three months each. Two pupils were sent to the Boston Floating Hospital for service during the summer. Five pupils have benefited by a two-months course in Public Health Nursing under the auspices of the Instructive District Nursing Association. Twelve pupils have received instruction and practice in obstetrical nursing at the New York Lying-In Hospital. All these affiliations are to be continued during the coming year with an added one at the Boston Dispensary. One pupil has commenced a special six-months course in anæsthetizing with Dr. Boothby, to be completed after her graduation.

On December 17, 1915, graduating exercises were held in the new amphitheater for a class of sixteen pupils. The address of the evening was made by Miss Annie W. Goodrich, Assistant Professor in Nursing and Health at Teachers College, Columbia University, New York.

Diplomas and pins were presented to each graduate by Mr. Charles P. Curtis, President of the Corporation of the Hospital.

During this year Mr. John P. Reynolds has presented a sum of money to the school, the interest to be expended yearly in providing a gold medal for the most efficient nurse graduating from the School of Nursing. This is in memory of his father, the late Dr. John P. Reynolds, for many years Professor of Obstetrics in the Harvard Medical School and a friend of the nursing profession.

This medal was awarded at graduation to Gertrude Mary Gerrard.

A few instances of serious illness have occurred among the nurses.

It is with the deepest regret that the death of Mary Margaret Lyons on the ninth of June, 1915, is recorded. She was a woman of fine character and during her two

years in the school had proved herself a capable and efficient nurse.

There are at present on the nursing staff:

Superinter	ndei	nt	of	N	ur	se	S		•	•							
Assistant	sup	eri	nt	en	de	nt	of	f n	ur	ses	3						
Instructor	s .																
Supervisor																	
Night sup																	
Graduate sistants	hea	ad	n	ur	ses	3 6	an	d	op	er	ati	ng	1	·00	m	a	.S-
Pupils																	
Probation																	
Total																	

Twenty pupils will be admitted to the preliminary course early in the new year, eight of whom will have to be housed outside the hospital.

Our greatest needs are for more rooms for housing nurses and a diet laboratory for their better instruction in dietetics.

My grateful acknowledgments are hereby made to the administrative staff of the hospital for its cordial support in the affairs of the school, to the resident physicians and surgeons for the continued high quality of their lectures and instruction to the pupils, and to my own staff of assistants for their uniform faithfulness and loyalty to the best interests of the school and the hospital.

CARRIE M. HALL, R.N.,

Superintendent of Nurses and Principal of the School of Nursing.

# In Memoriam

#### MARY MARGARET LYONS

Died June 9, 1915

Mary Margaret Lyons, a pupil of the School of Nursing of Peter Bent Brigham Hospital, died in the hospital, June 9, 1915, at the age of 24 years, 1 month and 20 days.

She had just entered upon the third year of her course in the school. Miss Lyons was a young woman of splendid qualifications for the work of the profession which she had entered. She was capable, conscientious and efficient. As a student her work had been of uniformly high order. She had won the confidence and respect of all her fellow workers.

Her untimely death is deplored by all her hospital associates.

# Social Service

Last year the report of the Social Service Department covered only the period from September 9, 1914, to January 1, 1915 — the first few months of its work.

The department started with the services of one paid worker; during the past year (1915) the services of three volunteer workers made it possible to enlarge the work.

Special diabetic and heart clinics are now held in the Out-Door Department once a week. The social workers attend the clinics and assist the doctor in teaching the patients how to carry out the treatment prescribed. At the same time they establish friendly relations with the patients and visit them at their homes when it seems necessary to supervise the treatment and to find out if there are conditions which may retard the progress of recovery, such as unsanitary conditions, too many stairs to climb, or lack of proper nourishment.

In his report Dr. Christian describes these clinics more in detail. Mrs. Kenneth Mark has given a great deal of time and careful work to the diabetic clinic, and Miss Katherine Homans to the heart clinic.

A follow-up system for patients discharged from the house and those receiving treatment in the Out-Door Department was started the first of the year with Miss Laura Stedman in charge. Plans are now under way to enlarge this system.

The general feeling in our hospital is that the function of a social service department, connected with and supported by a hospital, should be closely allied with that of the hospital and not broaden out too far into many activities which would seem more properly the work of an organized charity. Not because these collateral activities

#### SOCIAL SERVICE

are unimportant, but because activities more closely associated with the regular hospital work ought to fully utilize all of the hospital's resources.

It would seem well to remind ourselves occasionally that the primary function of a hospital is to diagnose and treat diseased conditions and to cure or ameliorate symptoms resulting from them. The investigation of disease and the education of physicians, nurses and patients are important additional functions.

To give a patient who enters a hospital the most thorough and scientific treatment possible would seem to be the logical course for the ultimate good of the patient and of society. However, if the funds of the hospital are diverted largely into a department in order that the social conditions of the patient and his family may be improved, and even though these improvements seem very necessary, the regular work of the hospital suffers and less efficient diagnosis and treatment result, and herein lies the danger of extending the work of a social service department too far beyond the immediate needs of a thorough coöperation with the medical work of the institution which aims to provide for each patient the best possible service.

During this year

- 365 Patients have been referred to the Social Service Department.
- 325 Visits made to the homes of patients.
- 136 Visits made to patients on wards.
- 237 Interviews held with patients in the Out-Door Department.

#### Reasons referred:

- 42 For care during convalescence.
- 18 For care in chronic illness.
- 20 For Tuberculosis Sanatoria.
- 71 To return for treatment.
- 22 For rest in country.

- 11 For institutional care.
- 11 Employment.
  - 6 Change of occupation.
  - 9 Work for handicapped.
- 13 Home care.
- 7 Temporary care of children.
- 4 Instruction in hygiene.
- 8 Financial aid.
- 6 Friendly advice.
- 4 Illegitimacy.
- 5 Apparatus.
- 2 Lodging.
- 3 Transportation.
- 4 To do less work.
- 3 For hospital care.
- 69 For diabetic clinic.
- 27 For heart clinic.

In this work the following special agencies were made use of:

### Hospitals:

Robert B. Brigham Hospital.

Boston Consumptives' Hospital, Out-Patient Department.

Psychopathic Hospital.

The Children's Heart Hospital.

Harvard Dental School.

Forsyth Dental Infirmary.

State Sanatoria.

Monson State Hospital.

Tewksbury State Infirmary.

Long Island Hospital.

House of the Good Samaritan.

## Homes for Convalescent and Chronic Care:

Chickering House.

Channing Home.

Milton Convalescent Home.

St. Luke's Convalescent Home.

St. Monica's Home.

Florence Crittendon Home.

Salvation Army Home.

Convalescent Home, Massachusetts General Hospital.

#### SOCIAL SERVICE

#### Societies:

Associated Charities.

Associated Charities Department for Homeless Men.

Associated Charities, Lynn.

Charity Organization, Montreal.

Roxbury Charitable Society.

Society for the Prevention of Cruelty to Children.

Federated Jewish Charities.

Milk and Baby Hygiene Association.

Women's Education and Industrial Union.

Brookline Friendly Society.

Young Women's Christian Association.

Cambridge Country Week.

Country Week, Young Men's Christian Union.

Fathers and Mothers Club, Reading.

Lake Shore Home, Sharon.

Avon Home.

Invalid Aid Society.

### Social Service Departments:

Massachusetts General Hospital.

Boston Dispensary.

Infants' Hospital.

Mt. Sinai Hospital.

ALICE M. CHENEY.

# Report of the Pathologist

During the past year there were 101 autopsies performed. This represents 47.6 per cent of the deaths in the hospital, and this, though lower than it should be, is still a higher percentage than obtains in any of the other hospitals in the city. By means of the autopsy the changes which disease produces in the body are ascertained and the manner in which these changes have operated in causing the symptoms during life. Not infrequently underlying conditions are shown which could not be ascertained during life and which have profoundly modified the action of the final cause of death. With the advance in knowledge of disease the importance of the part played by conditions seemingly remote from the immediate cause of death has become increasingly manifest. No matter how advanced are the methods of clinical study and diagnosis, the knowledge so obtained must be confirmed and supplemented by knowledge of conditions as revealed by autopsy. The objections on the part of relations and friends to such post-mortem examinations are based upon a not unnatural objection to the supposed mutilation of the body. A thorough examination need not however produce any noticeable marring of the body, and if associated with embalming, as it can very easily be, will lead to a much better preservation. In the interest of the hospital work it is hoped that the objections to postmortem examinations, founded as they often are on ignorance of the manner in which they are carried out, will gradually subside.

During the year there were also made 1030 bacteriological and surgical examinations, which represent a part of the routine work of the hospital.

#### REPORT OF THE PATHOLOGIST

Dr. Warren Sisson resigned his position as Resident Pathologist to the hospital to accept the position of Instructor in Pediatrics at the Johns Hopkins Hospital. The position during July and August was filled by Dr. J. L. Stoddard, whose term as Pathological Interne terminated July 1. In September Dr. E. W. Goodpasture was appointed to the position.

The following publications from the laboratory have appeared during the year:

### DR. WARREN R. SISSON.

Experimental Pneumonia, Friedlander Type. Warren R. Sisson and I. Chandler Walker. Jour. of Exp. Med., 1915, Vol. 22, No. 6.

Friedlander Bacillus Pneumonia. Warren R. Sisson and Charles B. Thompson. Am. Jour. of Med. Sciences, Nov., 1915, No. 5., Vol. cl., p. 713.

## Dr. James L. Stoddard.

A Case of Open Ductus Arteriosus (Botalli) with Necropsy. Archives of Internal Medicine, July, 1915.

Torula Infection in Man. J. L. Stoddard and E. C. Cutler. Monograph No. 6. of the Rockefeller Institute for Medical Research. January 31, 1916.

#### Dr. W. T. Councilman.

Anatomical Consideration of Tumors of the Brain, with Special Reference to the Gliomata. Colorado Medicine, October, 1915.

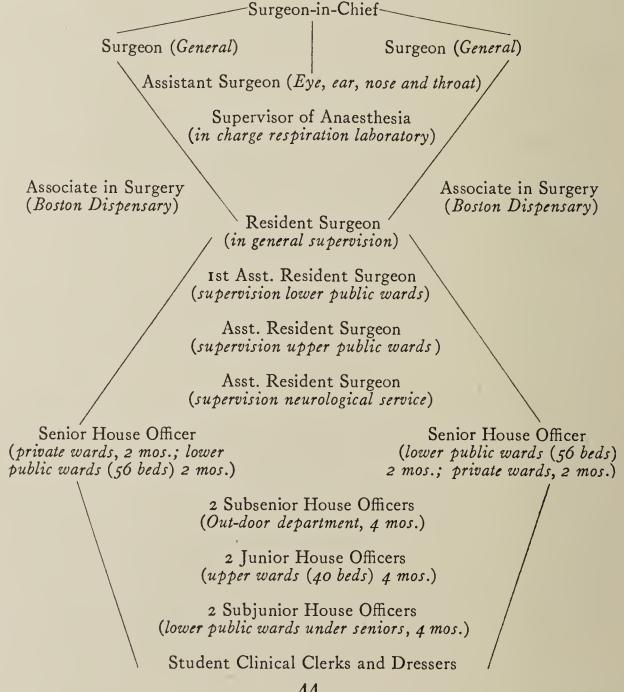
In addition Dr. Turley has carried out important researches on the tubules of the kidney in pathological conditions, using the method of reconstruction. Dr. Ghoreyeb has worked on the arterial system of the heart and kidney, using corrosion injections. Dr. Goodpasture has carried on a comparative study of the relation of tumor formation to age. The published results of this work will appear shortly.

W. T. COUNCILMAN,

Pathologist.

# Report of the Surgeon-in-Chief

STAFF ORGANIZATION. In the initial report from the surgical department, covering the period of our first two years of service, the working organization of the surgical staff was described and comments were made upon the directions in which it might be expected to develop along the lines of subdepartmental specialization. Some minor changes have been made in the original scheme of organization and the service gradations may be represented as follows:



#### REPORT OF THE SURGEON-IN-CHIEF

There are many advantages in a fixed organization with continuous duties throughout the year, for it so unifies and standardizes the service that without obvious dislocation any individual may, for suitable reasons, drop his active participation in the actual bedside and operative work for any reasonable length of time, his place becoming automatically filled by the next in line.

The chief brunt of responsibility for seeing that the service runs smoothly rests upon the four salaried residential officers, and for the Resident Surgeon in particular this is a heavy burden. Not only does provision for the daily operative schedule devolve upon these men, a task which with the continued growth of the service becomes increasingly complex, but they also assume, in addition to their supervision of the wards, much of the clinical instruction which we are called upon to give not only to the medical students but to the nurses in training. The position of Resident Surgeon — and Physician too, for that matter - in a hospital effectively organized along modern lines should be regarded as the greatest prize a young man can receive. The post is one for which, particularly in surgery, a long preliminary training is necessary and hence it is rarely attained until several years after graduation, but when once attained it gives an intensive operative experience to the incumbent which should put him in his familiarity with the problems of general surgery years ahead of his contemporaries and well repay him for his long apprenticeship.

All modern tendencies in surgery have been toward specialization and in the report of a year ago some discussion of this subject was entered upon. It was then stated that we might regard ourselves as fortunate in being able at the outset to organize the service at the Brigham Hospital without specialization — unless we are to regard Medicine and Surgery in themselves as special subjects. In this way we have been permitted to await

the development of promising young men about whom subdepartments might be permitted to grow and thus to let specialization, as there was opportunity for it, develop within our own walls, rather than immediately to accept as essential to our serviceableness as a hospital the subdepartments which have come to be regarded as essential in other institutions.

Our first step in officially recognizing a special subdepartment in surgery was taken in March, 1915, when Dr. C. B. Walker, after a three years' internship at the Massachusetts Eye and Ear Infirmary, was appointed on a fulltime basis. Not only was there need of expert ophthalmoscopic and perimetric studies in connection with the larger number of neurological cases in the clinic, but there was growing need for special supervision of the eye, ear, nose and throat patients in the Out-Door Department. From this department Dr. Walker admits patients to beds in the surgical wards and his services as a consultant in his specialties through the hospital in general are highly appreciated. It will doubtless be impossible for him, single handed, to long cover this broad field in view of its inevitable growth. It is to be hoped that as the proper men become available we may come to establish other subdivisions of the service which will be equally productive.

One slight change has been made during the year in the arrangement of the house officer service to which attention may be drawn — namely, in having the subseniors instead of the senior house officers put in charge of the Out-Door Department. Such misgivings as may have been felt in placing other than the most experienced men in these responsible positions have been dispelled by the continued rapid growth of the ambulatory clinic; and obligations may be expressed to Drs. Woodward and Van Gorder for first demonstrating by the excellence of their work the wisdom of the change. The new arrangement

will enable us to turn over to the senior house officers during their last four months of service more actual operative work than would otherwise have been possible.

The residential system we have adopted is patterned after that which in the past has proved so effective at the Johns Hopkins Hospital. That the system is recognized as giving a valuable training is indicated by the number of our graduates who have been called to important positions elsewhere. Dr. Emil Goetsch, after a period of three years as Resident Surgeon, was appointed an Associate in Surgery on the staff at Johns Hopkins a compliment which served to lessen our sense of loss of this valuable man whose capacity and industry made him particularly helpful during our early formative period. Dr. Rand, after a year as Third Assistant Resident, was given the responsible position of Resident Surgeon in the Mercy Hospital in Chicago; and during the year five of our recent house officers have received residential posts elsewhere: Dr. E. C. Cutler, Dr. J. J. Morton (after an intervening year at the Rockefeller Institute) and Dr. M. N. Smith-Peterson at the Massachusetts General Hospital; Dr. J. B. Boehm at the Greenpoint Hospital in Brooklyn; Dr. E. P. Lehman at the Barnes Hospital of Washington University. Dr. S. H. Hurwitz was made an Instructor in Research Medicine on the George Williams Hooper Foundation in the University of California. Only two of our first fourteen house officers have gone immediately into surgical practice. The others have all continued in more or less important positions here or elsewhere in connection with institutional work.

Growth of the Service. In view of the fact that the hospital was erected in a community where large, time-honored and deservedly famous hospitals already existed, its growth has been noteworthy and compares favorably with that of other teaching hospitals of corresponding size which have a university connection elsewhere. The total

admissions in 1913 were 1370; in 1914, 2843; in the past year, 3557. The admissions to the Johns Hopkins Hospital in the first three years after its opening in 1899 were 788, 1825 and 2276.

Though our 220 beds are at present equally divided between Medicine and Surgery, the inevitable tendency of the day is for general hospitals to show a more rapid growth in the number of surgical admissions. This is due unquestionably to the complicated and detailed nature of surgical therapeutics, and whereas most modern operations can hardly be undertaken with safety in the patient's home, this does not apply in the same degree to the home treatment of most non-surgical maladies.

A predominance of surgical cases is a characteristic of hospitals in our own community as well as of general hospitals elsewhere. Thus in the Boston City Hospital in 1914–15 there were 5603 medical admissions (including the neurological and dermatological patients), whereas there were 8203 surgical admissions, if we include the surgical specialties. At the Massachusetts General Hospital in 1915 there were 2678 medical and 3825 surgical admissions. The 1915 report of the Johns Hopkins Hospital records 1615 medical and 2398 surgical admissions excluding the 943 gynecological patients. In the last report from the Lakeside Hospital in Cleveland the year's recorded admissions were 1298 medical and 2654 surgical (exclusive of 573 gynecological) patients. Many other examples might be given.

It would appear that our medical and surgical admissions for the past year were approximately equal (1774 medical and 1783 surgical) and doubtless for teaching and investigative purposes it would be desirable that they should remain so. However, it can be seen, from the fact that there were 622 medical readmissions, largely for salvarsan administrations, and only 167 surgical readmissions, and from the fact that there were 99 cases trans-

ferred to us for operation and 41 transfers from surgery to medicine, the actual number of individuals receiving their major treatment and accompanying study in the two departments is in the ratio of about 2 to 3.

These figures are reviewed merely to point out that with two equally manned services, even if we disregard the physical strain of surgical operations, a disproportionate burden of work is thrown on the surgical staff, and this will have to be remedied if they are to remain productive and at the same time kept to standards of bedside records and ward work which have been set for them. Particularly is this true of the members of the staff in charge of the patients with neurological disorders, which represent possibly 15 or 20 per cent of our admissions, for there are no conditions which demand a more time-consuming preliminary study, more nerve-racking and exhausting operations and more detailed after-treatment.

With 110 surgical beds at our disposal and an average hospital sojourn per patient of 17 days, our annual limit of admissions would be 2310 provided all the wards are open throughout the year and the beds kept filled. To be sure an average sojourn of 17 days is a long one, but as explained a year go, important cases are often retained not only for purposes of clinical instruction, but sometimes for long periods when they could not be cared for at home, and also when in obscure conditions an ultimate post-mortem. examination is desirable. Still, the present clinical material being selected from a wide geographical distribution proves to be of unusual interest and 2000 odd patients in the service would amply supply the necessary teaching material. By shortening the average sojourn per patient to 15 days, which more nearly corresponds to that of other hospitals, the number of possible admissions could be increased to 2640 a year.

NEEDS OF THE SERVICE. The Out-Door Department, like the clinic, despite its very insufficient and uncom-

fortable quarters, has shown a healthy growth; and though we must necessarily refer many cases to other hospitals, the number of visits has increased from 15,713 in 1914 to 19,924 in 1915 — an increase due in part to the installation of the eye, ear, nose and throat subdivision. The medical department has been given new and attractive quarters on the top floor of the building and it is to be hoped that provision will be made in turn for suitable accident, examining and dressing rooms on the ground floor for surgery as well. Though this is one of our pressing needs, increasing activities in other directions must soon be provided for by suitable accommodations.

We could hardly have foreseen, with all appreciation of the importance of an X-ray department, how rapidly this adjunct of both the medical and surgical services would have developed. Great credit is due to our first Röntgenologist, Dr. Luger, for the impetus he gave to this work at the outset and to his able successor, Dr. Carr, for its further organization. The department has far outgrown its primary quarters and despite frequent concessions of space it is sadly cramped for room, and must share what space it has with that needed for ordinary photographic work, for which no provision was made in the original plans.

Another need, which is shared alike by both services and has been felt since the outset, lies in the unsatisfactory and scant accommodation for the necessary number of residential house officers, and it is hoped ere long that a suitable building with more comfortable quarters may be erected for them and at the same time provision made for a study and examining room for each of the attendant surgeons and physicians who would only be justified in giving the institution their undivided service in case they receive quarters they might call their own.

These needs will doubtless be met in their turn, for unquestionably the most urgent requirement was the erec-

tion of a new amphitheater, which was completed in time for the opening of the school exercises in the fall of 1915. It has proved to be just the right building in just the right position and has served not only as a satisfactory gathering place for our clinics and Tuesday evening meetings, but with its record room is in an ideal situation to tie together the three departments of medicine, pathology and surgery. Owing to its proximity to the wards it has added enormously to the convenience and effectiveness of the hospital as a teaching institution.

THE HOSPITAL AND THE WAR. Small as its share may have been, nevertheless the institution during the year has added its bit toward the mitigation of the suffering abroad. Dr. Luger, who came to us from Vienna, was at home on his vacation when the war broke out and he has since been in active service with the Austrian army on the Russian front. From the medical house officers Dr. I. C. Walker spent some months at the French Military Hospital at Château de Passy; Dr. H. S. Forbes went with Dr. Strong to Serbia and remained at work in Monastir after its fall during the remainder of the year; Dr. George Benet first served with the Harvard Unit at Neuilly, then at the Château d'Annel Ambulance, and subsequently returned with Dr. Cheever's unit. From the surgical staff Drs. Cushing, Boothby, Cutler and Smith-Peterson, together with Miss Martin, the head nurse of the operating room, all served early in the year in the American Ambulance with the first Harvard Unit, and at the same time one of our trustees presented a motor ambulance and loaned a son as its driver to this same military hospital. In November Dr. Cheever organized the second University Contingent for service with the British Medical Corps in France and our recent house officers Drs. E. B. Towne, W. D. Jack and George Benet made part of his personnel.

Possibly, however, the chief service which the hospital

has rendered has come from its privileging the Surgical Dressings Committee, under the chairmanship of Mrs. Frederick S. Mead, to have its central depot in the uninstalled Zander room in the Out-Patient Building. Here some five or six hundred volunteer workers have been engaged since October of 1915 in putting up supplies which the overworked operating room nurses have faithfully sterilized and which are then sealed in tins, crated and shipped abroad to various destinations, chiefly through the American Clearing House in Paris. From the outset they have furnished the various Harvard units with their supplies. During their first six months more than 1000 cases containing over 1,000,000 dressings have been sent abroad and the reputation of these carefully prepared and standard supplies has spread far and wide. The hospital receives enough reflected credit from this work to repay it an hundred fold for the slight sacrifice it has made in putting some space at the disposal of this committee.

INTERHOSPITAL RELATIONS. Our proximity to neighboring institutions has been to our advantage in many ways. This applies particularly to the Children's Hospital, and Dr. Lovett and his associates have on innumerable occasions been of aid to us when we were in need of expert opinions on orthopedic problems. Exchange ward visits with the entire staff are made every week between the two hospitals to the mutual benefit and instruction of both services. Our indebtedness should also be expressed to the authorities of the Huntington Hospital and to Dr. Duane in particular for generous coöperation in many instances when we have desired to employ radium for therapeutic purposes. The clinic moreover has profited by the participation in some of its teaching exercises of Drs. Cotton and Nichols of the City Hospital, Dr. Edsall of the Massachusetts General and Dr. Derby of the Eye and Ear Infirmary.

Publications. Some of the more important pieces of

### REPORT OF THE SURGEON-IN-CHIEF

work which were completed during the year were not in print until 1916, notably Dr. Goetsch's monograph on "The Influence of Pituitary Feeding upon Growth and Sexual Development," the study of torula infections by Drs. Cutler and Stoddard, and a clinical and experimental report upon pineal disorders by Dr. Horrax. The titles of the papers which appeared during 1915 are as follows:

- Walter M. Boothby. A Determination of the Circulation Rate in Man at Rest and at Work. Am. Journ. Physiol., 1915, XXXVII, pp. 383-417.
- Walter M. Boothby and Frank B. Berry. The Effect of Work on the Percentage of Hæmoglobin and Number of Red Corpuscles in the Blood. Am. Journ. Physiol., 1915, XXXVII, pp. 378–382.
- —— Distension of the Lungs: its Effect on the Respiration in Man and in Normal and Vagotomized Dogs. Am. Journ. Physiol., 1915, XXXVIII, pp. 433-451.
- WALTER M. BOOTHBY and IRENE SANDIFORD. The Analysis of Nitrous Oxide for Physiological Work. Am. Journ. Physiol., 1915, XXXVII, pp. 371–377.
- Walter M. Boothby and V. N. Shamoff. A Study of the Late Effect of Division of the Pulmonary Branches of the Vagus Nerve on the Gaseous Metabolism, Gas Exchange, and Respiratory Mechanism in Dogs. Am. Journ. Physiol., 1915, XXXVII, pp. 418–432.
- David Cheever. Concerning Traumatic Rupture of the Duodenum and Duodenal Fistula. Boston Med. and Surg. Journ., 1915, CLXXIII, pp. 454–547.
- STANLEY COBB. Hæmangioma of the Spinal Cord, associated with Skin Nævi of the same Metamere. Ann. Surg., December, 1915, pp. 641-649.
- STANLEY COBB and RICHARD M. SMITH. A Clinical and Pathological Study of 100 Infants. Arch. Pediat., June, 1915.
- HARVEY CUSHING. Concerning the Results of Operations for Brain Tumor. Journ. Am. Med. Assn., 1915, LXVI, pp. 189–195.

- HARVEY CUSHING. The Harvard Unit at the American Ambulance in Neuilly, Paris. Boston Med. and Surg. Journ., 1915, CLXXII, pp. 801–803.
- The Work of the American Ambulance Hospital in Paris. Privately printed, 1915, pp. 1–8.
- HARVEY CUSHING and EMIL GOETSCH. Hibernation and the Pituitary Body. Journ. Exper. Med., 1915, XXII, pp. 25-47.
- HARVEY CUSHING and CLIFFORD B. WALKER. Distortions of the Visual Fields in Cases of Brain Tumor. (Fourth paper.) Chiasmal Lesions, with Especial Reference to Bitemporal Hemianopsia. Brain, London, 1915, XXXVII, 341–400.
- HARVEY CUSHING and LEWIS H. WEED. Studies on Cerebrospinal Fluid. VIII. The Effect of Pituitary Extract upon its Secretion (Choroidorrhoea). Am. Journ. Physiol., 1915, XXVI, pp. 77–103.
- —— Studies on the Cerebro-spinal Fluid and its Pathway. IX. Calcareous and Osseous Deposits in the Arachnoidea. Bull. Johns Hopkins Hosp., 1915, XXVI, pp. 367–369.
- Ernest G. Grey. Studies on the Localization of Cerebellar Tumors. I. The Significance of Staggering Gait, Limb Ataxia, the Romberg Test, and Adiadochokinesis. Journ. Nerv. and Ment. Dis., 1915, XLII, pp. 670-679.
- --- Studies on the Localization of Cerebellar Tumors. III. Posterior New Growths without Nystagmus. Journ. Am. Med. Assn., 1915, LXV, pp. 1341-1345.
- Fibrin as a Hæmostatic in Cerebral Surgery. Surg., Gynec. and Obst., October, 1915, pp. 454–458.
- Ernest G. Grey and Gladys L. Carr. An Experimental Study of the Factors Responsible for Non-infectious Bone Atrophy. Bull. Johns Hopkins Hosp., 1915, XXVI, pp. 381–385.
- John Homans. A Study of Experimental Diabetes in the Canine and its Relation to Human Diabetes. Journ. Med. Research, 1915, New Series, XXVIII, pp. 1-51.
- GILBERT HORRAX. A Study of the Afferent Fibers of the Body Wall and of the Hind Legs to the Cerebellum of the Dog by the Method of Degeneration. Anat. Rec., 1915, IV, pp. 307-319.

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- Samuel H. Hurwitz and Gladys L. Carr. On the Monoostetic Form of Paget's Disease of Bone. Am. Journ. Roentgenol., May, 1915.
- Samuel H. Hurwitz and C. K. Drinker. The Factors of Coagulation in the Experimental Aplastic Anemia of Benzol Poisoning, with Special Reference to the Origin of Prothrombin. Journ. Exper. Med., 1915, XXI, pp. 401–424.
- The Factors of Coagulation in Primary Pernicious Anemia. Arch. Int. Med., 1915, Part I, XV, 733-745.
- CLIFFORD B. WALKER. A Contribution to the Study of Bitemporal Hemianopsia with New Instruments and Methods for Detecting Slight Changes. Arch. Ophth., 1915, XLIV, pp. 369-402.
- ——Observations on the Topical Diagnostic and Psychiatrical Value of the Wilbrand Test with a New Clinical Instrument. Arch. Ophth., 1915, XLIV, pp. 109–128.

SURGICAL STATISTICS. In the original report from this department attention was drawn to the utter lack of uniformity in the statistical tables of cases and operation as they are presented by the various hospitals of the country which make any pretense at all of tabulating the results of their surgical work. The question may well be raised as to whether the time required for their preparation and the cost of printing justifies the energy expended upon them, for they are unsatisfactory at best and doubtless are rarely consulted.

Unquestionably their value would be increased if the hospitals of a given community like our own would agree upon a uniform system of tabulation, and a start has been made in this direction. A committee on hospital organization had already been established by the Massachusetts Medical Society and in conjunction with representatives of the major hospitals a meeting of this committee was held at which an agreement was reached and a subcommittee appointed. This subcommittee has held several meetings and it is hoped that eventually some uniformity

in nomenclature, as well as in the system of tabulations, may be agreed upon. In this way not only may the differences in the character of the service and the quality and quantity of the work of the several hospitals be compared, but the combined statistics will become more available for those interested in vital statistics.

The so-called "International Classification," though compiled merely for the purpose of registration of mortality statistics, has been utilized by many institutions, chiefly with the Bellevue modifications and rearrangements, as a means of recording morbidity statistics as well. Unsatisfactory as this classification is for clinical purposes, it has nevertheless seemed best to continue to build upon this foundation, until some more acceptable method is devised, in the hope that more hospitals will meanwhile become accustomed to the use of the title numbers. But until hospitals will agree upon the method of presentation and the elimination of such errors as come from transfers from service to service and readmissions of patients with the same malady, the figures will continue to be confusing and more or less valueless from a combined statistical point of view, and of no real value even to the individual hospital concerned.

In our first report the effort was made to have the number of admissions and the number of diagnoses conform—that is, a single and the more important diagnosis was recorded for each patient. At the same time it was proposed for this year's report to fuse the two surgical tables, for diseases and operations, into one, so that the surgical treatment and its result might appear in the table in juxtaposition to the disease for which it was undertaken. This plan, as will appear from the appended table, has been followed, though it necessitated the listing of more than one disorder per patient, so that the number of admissions and diseases no longer correspond, and it is well to abandon this custom. If our nomenclature of diseases is

#### REPORT OF THE SURGEON-IN-CHIEF

unsatisfactory for statistical purposes the nomenclature of operations is even more so, and an interhospital committee has been appointed in the hope of bringing some order out of this chaos as well.

As in our first report, abstracts of the histories of patients who have died in the hospital after operation have been appended, but I am doubtful whether this is worth the clerical work expended upon it, and I confess that in their present form this may be true of these tabulations in general.

The 72 deaths following the 1526 operations of the year give an operative mortality of 4.7 per cent. In this estimation are included all deaths which occurred in the hospital after an operation had been performed, no matter how long a time may have elapsed, and even if the operation may have served to greatly prolong life. This high percentage is due largely to the many difficult and desperate cases admitted with terminal intracranial lesions. Following the 215 operations for major intracranial disorders, largely in the brain-tumor series, there were 23 deaths, representing one third of the entire number of fatalities. If these special cases are deducted from the others, it leaves an operative mortality of 3.7 per cent for the general surgical service for the year.

Table A

# Surgical Diagnoses and Operations

JANUARY I, 1915-DECEMBER 31, 1915

	DIAG	NOSES	es Opera	
Diseases and Conditions	Total	Deaths	Total	Deaths
ABNORMALITIES AND CONGENITAL MALFORMATIONS				
Anomaly (cranial defect)	1 1 5			
Excision			4	
THE BLOOD				,
Anæmia, pernicious	1		2 1	
THE BONES				
Exostosis	1		1	
Articular cartilage int. condyle femur			2	
Calcaneus	4 3		1	

# REPORT OF THE SURGEON-IN-CHIEF

Drawana in Canada	DIAG	Diagnoses		ATIONS
Diseases and Conditions	Total	Deaths	Total	Death
(Bones of) face, compound	. 1.			
Femur	. 8			
Bone plate			1	
Removal of bone plate			1	
Removal of nail from femur			1	
Fibula	. 3			
Reduction			2	
(Bones of) foot	. 6	,		
Reduction			2	
Forearm (ulna)				
Forearm (both bones)				
Forearm, compound	1			
Bone-plate drainage			1	
Removal of bone plate	1	1 1		
Incision of abscess			1	
(Bones of) hand				
Humerus				
Open reduction			2	
Wiring of fracture		1 1	1	
Leg (both bones)				
Leg (Pott's)				
Leg (both bones), compound	`			
Bone plate			1	
Removal of bone plate				
Olecranon		1		
Fixation by nailing		1	1	
Manipulation				
Mobilization			1	
Wiring	,	1		
Patella	1	1	1	
		1	1	
Exploratory internal arthrotomy			1	11
Operative repair				
Pelvis	1			
Radius (Colles)				
Radius (Colles)			2	
Open reduction			4	
Ribs	·			
Scapula		2		
Skull			1	
Exploration and decompression			$\frac{1}{3}$	
Subtemporal decompression	• • • • • •		3	12

D. C	DIAG	NOSES	OPER	ATIONS
Diseases and Conditions	Total	Deaths	Total	Deaths
Skull (old fracture)	13			
Exploration and decompression	1		1	
Removal of depressed area frontal bone	l .	)		
Subtemporal decompression				
Transfrontal exploration with exposure of				
chiasm	ì		1	
Tibia				
Bone plate	ž.		1	
Removal of bone plate			1	
Tibia, compound	1		0	
Tibial tuberosity				
Vertebra		•		
Hyperostosis				
Osteomyelitis, acute and chronic				
Amputation of leg			1	
Incision and drainage				
Removal of sequestrum	1			
Removal of tibia		4 1		
Resection and amputation of toe				
Osteomyelitis, tuberculous			_	
Resection of ribs			1	
Scoliosis			•	
Tuberculosis of vertebra (sacrum)				
Excision of sinus tract			1	
Tumor of bone			•	
Cyst of humerus	1			
Incision and curettage	1		1	
Osteoma of skull				
Excision			1	
Osteo-sarcoma of mandible (recurrent)			-	
Sarcoma of humerus				
Sarcoma of tibia				
Exploration	1		1	
Sarcoma of vertebra (cf. Spinal cord)			•	
Syphiloma of skull	1			
of philodia of okali	1			
THE BURSÆ				
Bursitis	6			
Excision			2	
Incision and drainage				

# REPORT OF THE SURGEON-IN-CHIEF

D	Diagnoses					
Diseases and Conditions	Total	Deaths	Total	Deaths		
THE CIRCULATORY SYSTEM						
Arteries and Veins						
Aneurysm (popliteal)			1			
Ligation of artery	1		1			
Resection of aneurysm		1	I i			
Arteriosclerosis	1 2					
Phlebitis	4					
Thrombosis of mesenteric artery	1	1		4.2		
Exploratory laparotomy		1		$1^3$		
Thrombosis of mesenteric vein	1		1	14		
Thrombo-angeitis obliterans	1					
Amputation of toes	l l		1			
Thrombo phlebitis						
Varix of legs			26	15		
Excision		, ,	20	10		
Excision			.   15			
Excision and skin graft			11			
Skin graft		1	11			
· Heart						
Dilatation of heart	. 3					
THE DIGESTIVE SYSTEM						
Appendix						
Appendicitis, acute			3.			
Appendicectomy	. 94	1				

D C C	DIAG	NOSES	OPERA	ATIONS
Diseases and Conditions	Total	Deaths	Total	Deaths
Appendicitis, subacute			13	
Appendicitis with abscess	5	1		4.7
Appendicectomy		1	3 2	17
Appendicitis, gangrenous	2			
Appendicectomy	1		2	
Appendicitis, gangrenous — general peritonitis .  Appendicectomy		1	1	18
Appendicitis, gangrenous — local peritonitis	2	1		
Appendicectomy		1	2	19
Appendicectomy	1	1 1	5	
Appendicectomy, incision, drainage of peri-				410
tonitis, drainage pelvic abscess			1 1	110
Appendicitis, acute — general peritonitis	2	2		
Appendicectomy			2	1 <sup>11</sup> 1 <sup>12</sup>
· Ileostomy			1	1
Appendicectomy			11	
Tuberculosis of appendix			1	
Intestine				
Abdominal sinus	1			
Exploration of fistulous tract	1	1 1	1	
Adhesions, intestinal (including congenital bands)  Appendicectomy, incidental	1		3	
Division of band			4	
Excision of band	i	1 (		
Separation of adhesions				
Constipation	20			
Appendicectomy	1	1 )		
Division of parieto colic band				
Dilatation of colon				
Ileo-sigmoidostomy	t e		1	
Excision		1		1

<sup>\*</sup> In addition 17 Incidental Appendicectomies were done without mortality.

# REPORT OF THE SURGEON-IN-CHIEF

	DIAG	NOSES	OPER.	ATIONS
Diseases and Conditions	Total	Deaths	Total	Deaths
Enteroptosis	1			
Fæcal fistula		1		
Closure of fæcal fistula	1		1	
Repair of fistula, resection of cæcum		1		113
Intestinal indigestion				
Intestinal intoxication	1	1		
Ileostomy	1	1	1	114
Obstruction, intestinal		1		
Enterostomy		1 1	2	
Release of adhesions				115
Release of strangulation				
Stasis, intestinal				
Tuberculosis of cæcum	I .			
Resection of cæcum			1	
Tuberculosis of ileum				
Ulcer of duodenum	1	1		
Appendicectomy		i I	1	
Excision, Finney pyloroplasty				
Exploratory laparotomy	1	1		
Finney pyloroplasty	1	1		
Post-gastrojejunostomy		1	1	
Post-gastrojejunostomy, plastic occlusion pylorus			2	116
Post-gastrojejunostomy, plastic occlusion				
pylorus transection of stomach			2	
Ulcer of duodenum, perforated			~	
Infolding of perforated ulcer and post-gas-				
trojejunostomy	1		1	
Splanchnoptosis (visceroptosis)			_	
Appendicectomy	1		1	
Tumor of intestine			1	
Adeno-carcinoma cæcum	1			
Carcinoma		2		
Cauterization		- 1	1	
Colo-colostomy	1		1	
Colostomy		1	1	217, 18
Excision with lateral anastomosis				
Ileostomy				
Ileo-sigmoidostomy				
Separation of adhesions				

Diseases and Conditions	Diagnoses		OPERATIONS	
	Total	Deaths	Total	Deaths
Liver				
Abscess	1			
Cirrhosis	1			
Implantation of superior end of saphenous	1			
vein into peritoneum			1	
Congestion	1			
Jaundice, catarrhal	į.			
Obstruction, portal	1	1		
Rupture of liver				
(three), and cholecystostomy			1	119
Syphilis			_	_
~, p				
GALL BLADDER AND GALL DUCTS	1			
Adhesions about gall bladder	5			
Appendicectomy, incidental			1	
Release of adhesions	1	1 1		
Cholecystitis, acute	2	1		
Cholecystectomy			1	
Cholecystostomy			1	120
Cholecystitis, acute — cholelithiasis	l			
Cholecystectomy			5	
Cholecystectomy, choledochostomy			1	
Cholecystitis, chronic				200 0
Cholecystectomy		1	9	322-2
Cholecystectomy, repair of incision		1 1	i .	
Cholecystostomy			2	
Cholecystitis, chronic — cholelithiasis		1 1	8	
Cholecystectomy				124
Cholecystostomy				1
Cholelithiasis			1	
Appendicectomy, inc		1	1	
Cholecystectomy	1			
Cholecystectomy, choledochostomy			10	125
Cholecystostomy		1	1	
Choledochostomy			2	
Empyæma of gall bladder				
Tumor of gall bladder				
Carcinoma		1		
Exploratory laparotomy			1	126

	Diag	NOSES	SES OPERATIONS	
Diseases and Conditions	Total	Deaths	Total	Deaths
Mesentery, Omentum, and Peritoneum Rupture of mesentery		1	1	127
Abscess, pelvic	5		3 1 1 1 2	128
Sarcoma, retroperitoneal  Mouth, Pharynx, Salivary Glands, etc.  Tumor of lip Carcinoma  Excision with dissection of glands  Epithelioma  Excision	1		1 2	
MOUTH Tumor of mouth Carcinoma of jaw	2		2	
PHARYNX Pharyngitis	1 1 1	1		
SALIVARY GLANDS Tumor  Mixed tumor of parotid gland	3		3	
TEETH, GUMS, AND ALVEOLI Abscess (ulcerated tooth)			1	

	DIAG	NOSES	OPERATION	
Diseases and Conditions	Total	Deaths	Total	Deaths
Caries of teeth	1		1	
Unerupted tooth	1		1	
Abscess, alveolar			1	
Incision, drainage, extraction of teeth			1	
TONGUE				
Tuberculosis	i e		1	
Carcinoma	5	1		
Hemi-resection, radical dissection of neck.			1	
Ligation of external carotid, cauterization . Radical extirpation glands of neck, second-			1	
ary resection, and cauterization			1	
Fibroma			1	
TONSILS				
Abscess, peritonsillar	2			
Tonsillectomy, adenoidectomy, incision of	1			
abscess	1		1	
Tonsillitis, acute	1			
Tonsillitis, chronic			60	
Tonsillectomy			68	
Tonsillectomy			1	
Tonsillectomy and adenoidectomy		1		
Extraction of tooth		1	1	
Tumor of tonsils				
Carcinoma	1			
Œsophagus (				
Cardiospasm	3			
Dilatation			1	
Foreign body				
Extraction			1	
Œsophagismus	1			
Tumor of œsophagus				
Carcinoma		2	3	229,30
Gastrostomy			3	2.5,60

Decree	DIAG	NOSES	OPERATIONS	
Diseases and Conditions	Total	Deaths	Total	Death
Pancreas				
Pancreatitis	3	1		
Cholecystostomy, drainage for hæmorrhagid				
pancreatitis			1	131
Tumor of pancreas		1		
Carcinoma		1	2	132
Exploratory laparotomy			2	1
Resection	1		1	
RECTUM AND ANUS	10			
Abscess about rectum	ì		10	
Incision and drainage	I		10	
Excision	1		2	
Fistula in ano				
Excision	1		14	
Incision and curettage		1 1	2	
Hæmorrhoids				
Clamp and cautery			11	
Ligation and excision	1		29	
Pruritis ani				
Stricture of rectum				
Colostomy, dilatation	l .		1	
Incision, post-operative			1 .	
Resection of rectum, end to end anastomosi. Tumor of rectum			1	
Adeno-carcinoma	1			
Carcinoma		1		
Cecestomy	1		1	
Colectomy	1	1	1	
Colostomy		1 1		
Entero-colostomy			1	133
Exploratory laparotomy			1	
Papilloma	1			
Excision			1	
Sтомасн				
Cribbing	1			
Gastric neurosis	5			
Gastritis	3			

	DIAG	NOSES	OPERATION	
Diseases and Conditions	Total	Deaths	Total	Deaths
Gastroptosis	1			
Hyperchlorhydria	1			
Hypochlorhydria	1			
Ulcer of stomach	12			
Excision $\ldots$			1	
Excision, post-gastrojejunostomy			1	
Post-gastrojejunostomy				
Post-gastrojejunostomy plastic occlusion pylorus				
Pyloroplasty (Finney)				
Ulcer of stomach, perforation				
Vomiting, neurotic	1			
Vomiting of pregnancy				
Dilatation and curettage			1	
Tumor of stomach				
Carcinoma	18	3		
Exploratory laparotomy			$\parallel$ 4	
Gastrectomy, partial — post-gastrojejunos-			1	
tomy	1		1	
(1) Gastrectomy, partial — gastroenteros- tomy (Polya)				
(2) Anterior gastroenterostomy			1	134
Post-gastrojejunostomy			7	
Lympho-sarcoma		1		
Exploratory laparotomy				
THE DUCTLESS GLANDS				
Pituitary				
Acromegaly with tumor	. 10			
Subtemporal decompression	1		1	
Transphenoidal, partial extirpation struma		1	11 .	135
Acromegaly without tumor	)			
Drainage of sinuses			1	
Dyspituitarism and hypopituitarism				
(1) with pituitary tumor or cyst	. 25	1		
Decompression	1		2	
Subfrontal exploration			11	

<sup>\*</sup> A second post-gastrojejunostomy was performed for gastric ulcer and appears under duodenal ulcer, which was coexistent.

Dans a series of	DIAG	NOSES ·	Oper.	OPERATIONS	
Diseases and Conditions	Total	Deaths	Total	Deaths	
Transphenoidal, partial removal of struma or evacuation of cyst			13		
Subfrontal exploration			1		
Subfrontal exploration			1		
Transphenoidal decompression					
Infantilism (pituitary?)					
Thyroid Gland					
Exophthalmic goitre (hyperthyroidism)			1 3		
Myxœdema (surgical)	2		1		
Persistent thyroglossal duct	1				
Thyroid insufficiency	1				
Adenoma of thyroid	3				
Thyroidectomy, partial			3		
THE EAR  Labyrinthine syndrome					
Mastoiditis			1		
Skin graft	7				
Paracentesis			2		
Osteoma of auditory canal			1		

Total   Death   Total   Death	Decree Company	Diagnoses		Operations	
Adhesions of iris       1       1       1         Iridotomy (Zeigler)       1       1         Amblyopia (hysterical)       1       1         Blindness       1       1         Cataract       1       1         Glaucoma       3       3         Corneal trephine       1       1         Sclerostomy, trephine operation       1       1         Hemianppsia       6       6         Injury to optic nerve       1       1         Iritis       1       1         Keratitis       3       1         Ptosis of eyelid (congenital)       1       1         Plastic operation       1       1         Scotoma, central       1       2         Scotoma, central       1       2         Sceparated retina       2       2         Sclerotomy       1       1         Trephine operation       1       1         Strabismus       1       1         Trephine operation       1       1         Strabismus       1       1         Tenotomy and advancement for strabismus       1         Uveitis       1       1	Diseases and Conditions	Total	Deaths	Total	Deaths
Iridotomy (Zeigler)	THE EYE				
Iridotomy (Zeigler)	Adhesions of iris	1			
Amblyopia (hysterical)       1         Blindness       1         Cataract       1         Glaucoma       3         Corneal trephine       1         Sclerostomy, trephine operation       1         Hemianopsia       6         Injury to optic nerve       1         Iritis       1         Keratitis       3         Ptosis of eyelid (congenital)       1         Plastic operation       1         Scotoma, central       1         Separated retina       2         Sclerotomy       1         Trephine operation       1         Strabismus       1         Tenotomy and advancement for strabismus       1         Uveitis       1         HERNIÆ       1         Epigastric hernia       1         Repair       5         Femoral hernia, strangulated       3         Repair       108         Inguinal hernia       10         Repair       2         Umbilical hernia       8       1         Repair       8       1         Umbilical hernia, strangulated       2       1         Repair, caccos				1	
Blindness					
Cataract       1         Glaucoma       3         Corneal trephine       1         Sclerostomy, trephine operation       1         Hemianopsia       6         Injury to optic nerve       1         Iritis       1         Keratitis       3         Ptosis of cyclid (congenital)       1         Plastic operation       1         Scotoma, central       1         Scotoma, central       2         Sclerotomy       1         Trephine operation       1         Strabismus       1         Tenotomy and advancement for strabismus       1         Uveitis       1         HERNIÆ       1         Epigastric hernia       1         Repair       5         Femoral hernia       6         Repair       5         Inguinal hernia       110         Repair       108         Inguinal hernia       2         Repair       2         Umbilical hernia, strangulated       2         Repair       8         Umbilical hernia, strangulated       2         Repair, cacostomy, resection of bowel, appendicectomy, incidental		l.			
Corneal trephine         1           Sclerostomy, trephine operation         1           Hemianopsia         6           Injury to optic nerve         1           Iritis         1           Keratitis         3           Ptosis of eyelid (congenital)         1           Plastic operation         1           Scotoma, central         1           Separated retina         2           Sclerotomy         1           Trephine operation         1           Strabismus         1           Tenotomy and advancement for strabismus         1           Uveitis         1           HERNIÆ         1           Epigastric hernia         1           Repair         1           Femoral hernia         6           Repair         5           Femoral hernia, strangulated         3           Repair         108           Inguinal hernia         110           Repair         2           Umbilical hernia         8         1           Repair         8         1           Umbilical hernia, strangulated         2         1           Repair, cæcostomy, resection of bowel,					
Sclerostomy, trephine operation         1           Hemianopsia         6           Injury to optic nerve         1           Iritis         1           Keratitis         3           Ptosis of eyelid (congenital)         1           Plastic operation         1           Scotoma, central         1           Separated retina         2           Sclerotomy         1           Trephine operation         1           Strabismus         1           Tenotomy and advancement for strabismus         1           Uveitis         1           HERNIÆ         1           Epigastric hernia         1           Repair         1           Femoral hernia         6           Repair         5           Femoral hernia, strangulated         3           Repair         108           Inguinal hernia         10           Repair         2           Umbilical hernia         8           Repair         8           Umbilical hernia, strangulated         2           Repair         8           Umbilical hernia, strangulated         2           Repair, cacostomy, r	Glaucoma	3			
Sclerostomy, trephine operation         1           Hemianopsia         6           Injury to optic nerve         1           Iritis         1           Keratitis         3           Ptosis of eyelid (congenital)         1           Plastic operation         1           Scotoma, central         1           Separated retina         2           Sclerotomy         1           Trephine operation         1           Strabismus         1           Tenotomy and advancement for strabismus         1           Uveitis         1           HERNIÆ         1           Epigastric hernia         1           Repair         1           Femoral hernia         6           Repair         5           Femoral hernia, strangulated         3           Repair         108           Inguinal hernia         10           Repair         2           Umbilical hernia         8         1           Repair         8         1           Umbilical hernia, strangulated         2         1           Repair         8         1           Umbilical hernia, strangulated	Corneal trephine			1	
Injury to optic nerve       1         Iritis       1         Keratitis       3         Ptosis of eyelid (congenital)       1         Plastic operation       1         Scotoma, central       1         Separated retina       2         Sclerotomy       1         Trephine operation       1         Strabismus       1         Tenotomy and advancement for strabismus       1         Uveitis       1         HERNIÆ       1         Epigastric hernia       1         Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       108         Inguinal hernia, strangulated       2         Repair       2         Umbilical hernia       8       1         Repair       8       1         Umbilical hernia, strangulated       2       1         Repair, caccostomy, resection of bowel, appendicectomy, incidental       1			: 1	1	
Iritis       1         Keratitis       3         Ptosis of eyelid (congenital)       1         Plastic operation       1         Scotoma, central       1         Separated retina       2         Sclerotomy       1         Trephine operation       1         Strabismus       1         Tenotomy and advancement for strabismus       1         Uveitis       1         HERNIÆ       1         Epigastric hernia       1         Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       3         Inguinal hernia       110         Repair       2         Umbilical hernia       8         Repair       2         Umbilical hernia, strangulated       2         Repair       8         Umbilical hernia, strangulated       2         Repair, cacostomy, resection of bowel, appendicectomy, incidental       1	Hemianopsia	6			
Iritis       1         Keratitis       3         Ptosis of eyelid (congenital)       1         Plastic operation       1         Scotoma, central       1         Separated retina       2         Sclerotomy       1         Trephine operation       1         Strabismus       1         Tenotomy and advancement for strabismus       1         Uveitis       1         HERNIÆ       1         Epigastric hernia       1         Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       3         Inguinal hernia       110         Repair       2         Umbilical hernia       8         Repair       2         Umbilical hernia, strangulated       2         Repair       8         Umbilical hernia, strangulated       2         Repair, cacostomy, resection of bowel, appendicectomy, incidental       1	Injury to optic nerve	1			
Keratitis       3         Ptosis of eyelid (congenital)       1         Plastic operation       1         Scotoma, central       1         Separated retina       2         Sclerotomy       1         Trephine operation       1         Strabismus       1         Tenotomy and advancement for strabismus       1         Uveitis       1         HERNIÆ       1         Epigastric hernia       1         Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       3         Inguinal hernia       110       1         Repair       2         Umbilical hernia       8       1         Repair       2       2         Umbilical hernia, strangulated       2       1         Repair, cacostomy, resection of bowel, appendicectomy, incidental       1       1					
Plastic operation         1           Scotoma, central         1           Separated retina         2           Sclerotomy         1           Trephine operation         1           Strabismus         1           Tenotomy and advancement for strabismus         1           Uveitis         1           HERNIÆ         1           Epigastric hernia         1           Repair         1           Femoral hernia         6           Repair         5           Femoral hernia, strangulated         3           Repair         108           Inguinal hernia         110           Repair         2           Umbilical hernia         8           Repair         8           Umbilical hernia, strangulated         2           Repair         8           Umbilical hernia, strangulated         2           Repair, cacostomy, resection of bowel, appendicectomy, incidental         1					
Scotoma, central         1           Separated retina         2           Sclerotomy         1           Trephine operation         1           Strabismus         1           Tenotomy and advancement for strabismus         1           Uvcitis         1           HERNIÆ         1           Epigastric hernia         1           Repair         1           Femoral hernia         6           Repair         5           Femoral hernia, strangulated         3           Repair         3           Inguinal hernia         110           Repair         108           Umbilical hernia         8           Repair         2           Umbilical hernia, strangulated         2           Repair         8           Umbilical hernia, strangulated         2           Repair, cæcostomy, resection of bowel, appendicectomy, incidental         1	Ptosis of eyelid (congenital)	1			
Scotoma, central         1           Separated retina         2           Sclerotomy         1           Trephine operation         1           Strabismus         1           Tenotomy and advancement for strabismus         1           Uveitis         1           HERNIÆ         1           Epigastric hernia         1           Repair         1           Femoral hernia         6           Repair         5           Femoral hernia, strangulated         3           Repair         3           Inguinal hernia         110           Repair         108           Umbilical hernia, strangulated         2           Repair         8           Umbilical hernia, strangulated         2           Repair, cæcostomy, resection of bowel, appendicectomy, incidental         1	Plastic operation			1	
Separated retina       2         Sclerotomy       1         Trephine operation       1         Strabismus       1         Tenotomy and advancement for strabismus       1         Uveitis       1         HERNIÆ       1         Epigastric hernia       1         Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       108         Inguinal hernia       110         Repair       2         Umbilical hernia       8         Repair       8         Umbilical hernia, strangulated       2         Repair       8         Umbilical hernia, strangulated       2         Repair, cæcostomy, resection of bowel, appendicectomy, incidental       1	Scotoma, central	1			
Sclerotomy       1         Trephine operation       1         Strabismus       1         Tenotomy and advancement for strabismus       1         Uveitis       1         HERNIÆ       1         Epigastric hernia       1         Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       3         Inguinal hernia       110         Repair       2         Umbilical hernia       8         Repair       8         Umbilical hernia, strangulated       2         Repair       8         Umbilical hernia, strangulated       2         Repair, cæcostomy, resection of bowel, appendicectomy, incidental       1					
Strabismus       1         Tenotomy and advancement for strabismus       1         Uveitis       1         HERNIÆ       1         Epigastric hernia       1         Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       108         Inguinal hernia       110         Repair       108         Umbilical hernia       8         Repair       2         Umbilical hernia, strangulated       2         Repair       8         Umbilical hernia, strangulated       2         Repair, cæcostomy, resection of bowel, appendicectomy, incidental       1		1		1	
Tenotomy and advancement for strabismus	Trephine operation			1	
HERNIÆ         Epigastric hernia       1         Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       3         Inguinal hernia       110         Repair       108         Inguinal hernia, strangulated       2         Repair       2         Umbilical hernia       8       1         Repair       8       1         Umbilical hernia, strangulated       2       1         Repair, cæcostomy, resection of bowel, appendicectomy, incidental       1	Strabismus	1			
HERNIÆ         Epigastric hernia       1         Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       3         Inguinal hernia       110       1         Repair       108       136         Inguinal hernia, strangulated       2       2         Umbilical hernia       8       1         Repair       8       1         Umbilical hernia, strangulated       2       1         Repair, cæcostomy, resection of bowel, appendicectomy, incidental       1	Tenotomy and advancement for strabismus.			1	
Epigastric hernia  Repair  Femoral hernia  Repair  Femoral hernia, strangulated  Repair  Inguinal hernia  Repair  Inguinal hernia, strangulated  Repair  Umbilical hernia  Repair  Umbilical hernia, strangulated  Repair  Repair  Umbilical hernia, strangulated  Repair  Repair, cacostomy, resection of bowel, appendicectomy, incidental	Uveitis	1			
Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       3         Inguinal hernia       110         Repair       108         Inguinal hernia, strangulated       2         Repair       2         Umbilical hernia       8       1         Repair       8       1         Repair, cæcostomy, resection of bowel, appendicectomy, incidental       1	HERNIÆ				
Repair       1         Femoral hernia       6         Repair       5         Femoral hernia, strangulated       3         Repair       3         Inguinal hernia       110         Repair       108         Inguinal hernia, strangulated       2         Repair       2         Umbilical hernia       8       1         Repair       8       1         Repair, cæcostomy, resection of bowel, appendicectomy, incidental       1	Epigastric hernia	1			
Femoral hernia  Repair  Femoral hernia, strangulated  Repair  Inguinal hernia  Repair  Inguinal hernia, strangulated  Repair  Umbilical hernia  Repair  Umbilical hernia, strangulated  Repair  Repair, cæcostomy, resection of bowel, appendicectomy, incidental  T		ı		1	
Repair5Femoral hernia, strangulated3Repair3Inguinal hernia110Repair108Inguinal hernia, strangulated2Repair2Umbilical hernia8Repair8Umbilical hernia, strangulated2Repair, cacostomy, resection of bowel, appendicectomy, incidental1					
Femoral hernia, strangulated  Repair  Inguinal hernia  Repair  Inguinal hernia, strangulated  Repair  Umbilical hernia  Repair  Umbilical hernia, strangulated  Repair  Repair  Umbilical hernia, strangulated  Repair  Repair  Repair, cacostomy, resection of bowel, appendicectomy, incidental  1		i		5	
Repair3Inguinal hernia1101Repair108136Inguinal hernia, strangulated22Repair22Umbilical hernia81Repair81Umbilical hernia, strangulated21Repair, cacostomy, resection of bowel, appendicectomy, incidental1		i e			
Inguinal hernia		ł.		3	
Repair108136Inguinal hernia, strangulated22Repair22Umbilical hernia81Repair81Umbilical hernia, strangulated21Repair, cacostomy, resection of bowel, appendicectomy, incidental1			1		
Inguinal hernia, strangulated 2 Repair 2  Umbilical hernia 8 1 Repair 8 1  Repair 2 1  Repair 2 1  Repair, cæcostomy, resection of bowel, appendicectomy, incidental 1				108	136
Repair 2   Umbilical hernia 8   Repair 8   Umbilical hernia, strangulated 2   Repair, cæcostomy, resection of bowel, appendicectomy, incidental 1					}
Umbilical hernia				2	
Repair 8   Umbilical hernia, strangulated 2   Repair, cæcostomy, resection of bowel, appendicectomy, incidental 1		3	1		
Umbilical hernia, strangulated				8	137
Repair, cæcostomy, resection of bowel, appendicectomy, incidental	*				
pendicectomy, incidental					
	The state of the s			1	
1 1 1	Intestinal resection, lateral anastomosis			1	138

Droptono Ave Covergeous	Diagnoses		Operations	
Diseases and Conditions	Total	Deaths	Total	Deaths
Ventral hernia	7		4	
INFECTIVE DISEASES				
Abscess				:
Abdominal wall			1	•
Buttock	1			
Incision and drainage			1	
Cervical				
Incision and drainage	1		2	
Gluteal	1			
Incision and drainage	1		1	
Heel	1		1	
Incision and drainage	1		1	
Lumbar			2	
Multiple (thigh and chest)	1			
Incision and drainage	1		1	
Operative wound				
Incision and drainage	I .		1	
Palmar	1			
Popliteal space	1			
Incision and drainage	1	1 1	2	
Skin graft	1	1 1	1 .	
Shoulder (with septicæmia)				
Incision and drainage			1	139
Submental	1			•
Incision and drainage			1	
Thigh				
Incision and drainage			2	
Thigh, periosteal				
Incision			2	
Tibia	1			
Incision and drainage	1		1	
Carbuncle	1		1	
Incision and drainage	V.		4	
Cellulitis		1	16	
Incision and drainage			10	1

Dronger and Company	Diag	NOSES	Operations	
Diseases and Conditions	Total	Deaths	Total	Deaths
Dysentery		1	1	140
Erysipelas			1	1
Gonorrhœa				
Pyæmia	_	2		
Multiple incisions			2	241, 42
Syphilis				
Vaccinia	1			
THE JOINTS				
Ankylosis	2			
Manipulation			1 1	
Arthritis, gonorrhœal		• • • • •	1	
Arthrotomy			2	
Arthrotomý, lateral			1	
Arthritis, infectious	1		2	
Arthrotomy right knee joint			3	
Arthrotomy		11	1	
Dislocations, clavicle, elbow, patella		- 1	1	
Arthrotomy			1	
Reduction		• • • • •	2	
Median arthrotomy, excision of int. semi-			4	
lunar cartilage		• • • • •	1	
Arthrotomy			2	
Plastic on ligament			1 1	
Hallux valgus	6			
Excision	1		1	
Sprain of ankle	1			

	DIAC	nosis	Oper.	OPERATIONS	
Diseases and Conditions	Total	Deaths	Total	Deaths	
THE LYMPHATIC SYSTEM			-		
Elephantiasis, non-filarial					
Hodgkin's disease					
Excision of glands			2		
Curettage and drainage	1		2		
Lymphadenitis with abscess					
Excision of glands			1		
Incision and drainage	_		1		
Tuberculosis of lymph glands (axillary and cer-					
vical)			21		
Excision	· ·		21		
mesenteric)					
Laparotomy, drainage of mesenteric abscess			1		
Tumors of lymph glands  Carcinoma	1				
Excision	1		1		
Lymphoma	1				
Lymphosarcoma	1		1		
Exploratory laparotomy, excision of gland		1	1		
THE MIND					
Dementia	2				
Dementia præcox				91	
General paresis of the insane	1				
Psychosis					
MISCELLANEOUS CONDITIONS					
Blood donor	2				
Exposure of vein			2		
Diabetes insipidus	1				
Diabetes mellitus					
Amputation of leg	1		3		
Gout	1				
Hypertension	1				

	DIAG	Diagnoses		ATIONS
Diseases and Conditions	Total	Deaths	Total	Deaths
Nausea, post-operative	4 3 	1	1 1	
Contracture of finger	1 1 3		1 1 1	
Hammer toe	1  1 		1	
Rupture of tendon, quadriceps	1 2 1 1		2	143
THE NERVOUS SYSTEM Brain, Spinal Cord, and Meninges				
Abscess of brain		- 11	1 1	144
Apoplexy, cerebellar  Cerebellar exploration  Arterial sclerosis, cerebral  Atrophy, progressive muscular	1  1	1	1	145

Dromana and Commence	Diagnoses		OPERATIONS	
Diseases and Conditions	Total	Deaths	Total	Deaths
Concussion of brain	3			
Encephalitis	2			
Headaches (including cephalalgia, migraine, etc.)	10.			
Hemiplegia				
Hydrocephalus				
Spino-abdominal drainage	1		1	
Hæmorrhage, subdural (post-traumatic)	Į.	1		
Subtemporal decompression			1	146
Laceration, cerebral				
Meningitis, blastomycotic		1		
Subtemporal decompression		1 1	1	147
Meningitis, pneumococcus		1		
Meningitis, serous				
Meningitis, syphilitic				
Meningitis, tuberculous		1		4.40
Laminectomy			1	148
Arachnoiditis, chronic serous				
Arachnoiditis, ossifying				
Meningo-encephalitis		1		
Myelitis		1		
Pachymeningitis (int. hæmorrhagica)			:	
Paraplegia	3			
	$\frac{2}{3}$			
Sclerosis, lateral	_		1	
Laminectomy			1	
Sclerosis, multiple				
Syphilis, cerebrospinal				
Syringomyelia				
Laminectomy, evacuation of cyst	_		1	
Tabes dorsalis				
Thrombosis, cerebral	_	1		
Rt. subtemporal decompression			1	149
Thrombosis, sinus	1 .			-
Tumor of brain	1			
For pituitary and pineal tumors cf. Ductless				
glands				
CEREBRUM				
Carcinoma, metastatic	1	1		
Subtemporal decompression			1	150

D	DIAG	NOSES	Operations	
Diseases and Conditions	Total	Deaths	Total	Deaths
Cyst, papillomatous	1			
Osteoplastic resection, evacuation cyst			1	i.
Endothelioma	5	2		
Extirpation of tumor			4	151
Subtemporal decompression			1	152
Glioma		4		
Extirpation and decompression			3	253,5
Partial removal of	)		4.	
Gliomatous cyst	t	1		
Evacuation or partial extirpation			3	105
Neuroblastoma		1		
Exploratory incision		1	1	1
Uncertified		1 1		
Osteoplastic exploration and decompression			6	
Subtemporal decompression		}		
Suboccipital decompression			2 4	156
Ventricular puncture			4	100
Glioma	2			
	_		1	
Subtemporal decompression	1		1	
CEREBELLUM	1			
Intracerebellar				
Endothelioma	2	1		
Extirpation	_		1	
Suboccipital exploration			1	157
Glioma	1	3		_
Subtemporal decompression			1	158
Suboccipital decompression			2	
Suboccipital extirpation			3	159
Cystic glioma				
Extirpation			1	
Evacuation			6	
Ependymal glioma				
Suboccipital partial enucleation			2	
Tuberculoma	2	2		
Suboccipital extirpation			2	260,6
Extracerebellar				
Cyst, arachnoid	5			
Suboccipital evacuation			3	

Dramana Carrana	Diag	NOSES	Operations	
, Diseases and Conditions	Total	Deaths	Total	Deaths
Endothelioma (cerebello-pontine)	1		1 6 3	162 163
tures, removal of arch of atlas, partial removal of tumor	10	2	1	101
ture			6	164
Cerebrum	2		1	
SPINAL CORD TUMOR				
Angioma	1		1	
Laminectomy, extirpation of tumor			1	
Laminectomy, partial removal of sarcoma.  Uncertified	_		2	
Exploratory laminectomy			1	
CRANIAL AND SPINAL NERVES				
Brachial plexus injury	5		3	
Neuralgia, trigeminal (major)			33	
Neuralgia, trigeminal (minor)			26 5	
Neuritis				
Amputation			1	
Infraorbital				

D	Diagnoses		OPER	OPERATIONS	
Diseases and Conditions	Total	Deaths	Total	Deaths	
Post-herpetic	2 1				
Paralysis of cranial nerves			1		
Paralysis of spinal nerves			1		
Suture of ulnar nerve			1		
Fibromyxoma	1	,	1		
Neuroma	1				
Aphasia	35 4 4 4 6 4 2		6		
Abortion			3		
Miscarriage			1		
Dilatation and curettage :					
Transperitoneal repair of ruptured uterus and dilatation and curettage			1		
POISONINGS AND INTOXICATIONS					
Alcohol poisoning	3				

D. C.		Diagnoses		OPERATIONS	
Diseases and Conditions		Total	Deaths	Total	Deaths
THE REPRODUCTIVE ORGANS					
Functional Disturbances involving Ma	ALE				
Dysmenorrhœa		1		2	
Menorrhagia		13		6	
Menopause		3			
Dilatation and curettage				. 5	
Dilatation and curettage				1	
MAMMARY GLAND Abscess		2			
Incision and drainage				2	
Hypertrophy			1	1 1	
Plastic excision		11			
Amputation of breast		1	1		
Tumor of mammary gland Adenoma, male breast				1	
Excision		12		1	
Amputation of breast				1	
Excision				1	
Pinch graft				1	
Female Reproductive Organs LIGAMENTS, OVARIES, AND TUBES					
Abscess, tubo-ovarian		2			
Incision and drainage				1	
Gestation, extrauterine				1	

	DIAG	Diagnoses		ATIONS
Diseases and Conditions	Total	Deaths	Total	Deaths
Salpingitis, acute	11	1		
Appendicectomy, incidental	1		1	
Myomectomy	L .			
Salpingectomy, salpingo-oöphorectomy, Ventral fixation	1		1	165
Salpingectomy, salpingo-oöphorectomy	1	1	i	
Salpingo-oöphorectomy			4	
Vaginal puncture			1	
Salpingitis, chronic	· 11			
Appendicectomy, incidental			2	
Plastic on Fallopian tubes freeing of adhe-				
sions			1	
Salpingectomy			2	
Salpingectomy-oöphorectomy			1	
Salpingo-oöphorectomy			3	
Salpingo-oöphorectomy, salpingectomy			2	
Salpingitis, subacute	2			
Salpingectomy, salpingo-oöphorectomy			2	
Salpingitis, tuberculous	3			
Salpingectomy			1	
Salpingectomy-öophorectomy			1	
Salpingitis and oöphoritis				
Appendicectomy, incidental			1	
$Hysterectomy \ldots \ldots \ldots \ldots$			1	
Salpingectomy			1	
Salpingectomy-oöphorectomy			6	166
Ventral suspension			1	
Torsion of ovary	1			
Salpingo-oöphorectomy			1	
Tuberculosis of Fallopian tubes	1			
Tumor of ovary				
Carcinoma	3	1		
Exploratory laparotomy	1		1	167
Salpingo-oöphorectomy, double			1	
Cyst	1			
Appendicectomy, incidental			3	
Excision			1	
Oöphorectomy				
Plastic resection of ovary				
Salpingo-oöphorectomy				

D	DIAG	Diagnoses		ATIONS
Diseases and Conditions	Total	Deaths	Total	Deaths
UTERUS				
Anteflexion	. 6			
Dilatation and curettage			4.	
Cervicitis	. 1			
Endocervicitis, chronic	. 1			
Dilatation and curettage			1	
Endometritis				
Dilatation and curettage			4.	
Hypertrophy of cervix uteri				
Laceration of cervix uteri				
Dilatation and cure tage, trachelorrhaphy			7	
Trachelorrhaphy		1	1	
Metritis	1			
Prolapse of uterus				
Amputation of cervix	1		2	
Myomectomy		4		
Trachelorrhaphy	i	1 1	l I	
Ventral fixation		T I		
Retroversion of uterus				
Amputation of cervix	i i		1	
Appendicectomy, incidental			i i	
Dilatation and curettage	1	1 1	1.1	
Trachelorrhaphy	l l			
Ventral fixation		1	}	
Ventral suspension				
Stricture of uterine canal				
Tumor of uterus				
Adeno-carcinoma	1			
Carcinoma		2		
Amputation with cautery			1	
Cauterization		1 1	4.	
Dilatation and curettage	1		_	
Ligation of int. iliac arteries, Cauterization		1 1	1	
Panhysterectomy		1 i	1	268,6
Salpingo-oöphorectomy	1	1 1	_	
Transplantation of ovary		1		
Fibroids	1	1	1	
Appendicectomy, inc			1	
Dilatation and curettage (duplex uterus)				
Excision	1		1	
Hysterectomy		1	14	
11 ysterectomy		1	14	

	DIAGNOSES		OPERATIONS	
Diseases and Conditions	Total	Deaths	Total	Deaths
Myomectomy			3	
Oöphorectomy, salpingectomy	1			
Salpingectomy	l .	1		
Repair of ruptured wound (hernia)	li .			
Ventral suspension				
Hydatid mole			_	
Dilatation and curettage	1		2	
Removal of mole	l .	1		
Trachelorrhaphy	1		_	
Myoma			1	
•	1		1	
Excision	1		1	
Sarcoma	1		1	
Hysterectomy			1	
VAGINA				
Atresia	2			
Cystocele				
Colporrhaphy			1	
Dilatation and curettage	1			
Cystocele and rectocele	1			
Colporrhaphy			3	
Dilatation and curettage	1			
Resection of ovary				
Trachelorrhaphy				
Rectocele	1		1	
			1	
Colporrhaphy			1	
Dilatation and curettage			_	
Perineal repair	1		1	
Fistula, vesico-vaginal	1			
Laceration of pelvic floor				
Perineorrhaphy	1	1	1	
Leucorrhœa	1			
Dilatation and curettage			3	
Relaxation of pelvic floor				
Appendicectomy, inc. $\dots$ . $\dots$ . $\dots$			I	
Colporrhaphy				
Perineorrha <mark>phy</mark>				
Repair of perineum			3	
VULVA				
Abscess of Bartholin's gland	1			
_			$\parallel$ 1	

Drantana in Carren	Diagnoses		OPERATIONS	
Diseases and Conditions	Total	Deaths	Total	Deaths
Tumor  Cyst of Bartholin's gland			1	
Male Reproductive Organs  PENIS  Paraphimosis	6		1 5	
Abscess  Incision and drainage  Hypertrophy of prostate  Cystotomy, suprapubic  Prostatectomy  Prostatitis, acute  Tuberculosis  Prostatectomy, perineal  Tumor of prostate  Carcinoma  SCROTUM  Gangrene  Multiple incisions and plastic reconstruction scrotum	9  1 1  3		1	170
SPERMATIC CORD  Hydrocele	17 11 3		17 9	

D	Diagnoses		OPERATIONS		
Diseases and Conditions		Total	Deaths	Total	Deaths
Orchitis		3		1	
THE RESPIRATORY SYSTEM					
Trachea and Bronchi					
Bronchiectasis  Artificial pneumothorax  Bronchitis, acute  Bronchitis, chronic  Fistula, tracheal  Foreign body in bronchus		4 1 1		1	
Larynx					
Obstruction		1			
Lung				-	
Gangrene		1 9 1 1	1		
SINUSES Adenoids		5			
Adenoidectomy				5	
Resection of septum				11	
Empyema of antrum of Highmore				1	
Epistaxis		$\begin{bmatrix} 1 \\ 6 \end{bmatrix}$			
Hypertrophy of turbinate bone				5	
Sinusitis		- 1		3	
Tumor of nose and accessory sinuses  Carcinoma of ethmoidal sinus	1	1			

Dramana Lawa Casanana	Diagnoses		Operations	
Diseases and Conditions	Total	Deaths	Total	Deaths
Carcinoma of superior maxilla	3		1	
Sarcoma of naso pharynx	1			
PLEURA  Emphysema	1 3 11 2		5	
Paronychia Psoriasis Ulcer Excision and skin graft Xanthochromia	1 7		2	
TUMORS, MISCELLANEOUS  Carcinoma of groin	2 2	1	1	
Cysts, sebaceous, of arm, leg, scalp		r	2	
Hæmangioma of hand			1	
Lipoma of axilla, back neck, occipital			4	
Lymphosarcoma of scapula			1	
Osteoma of toe			1	1

December Construction	Diagnoses		OPERATIONS	
Diseases and Conditions	Total	Deaths	Total Deaths	
Sarcoma of buttock	1			
$Exploration \dots \dots \dots \dots$			1	
Sarcoma of neck	1			
Tumor of sacrum malignant (?)	1			
THE URINARY ORGANS				
Bladder				
Atony of bladder	2			
Calculus, vesical				
Cystotomy, suprapubic			1	
Litholapaxy			1	
Cystitis	13			
Incontinence of urine	2			
Retention of urine	1			
Tumors				
Carcinoma				
Papilloma				
Cauterization			1 (	
Excision		• • • • • •	1	
Kidney				
Abscess of kidney	1			
Nephrotomy			1	
Abscess, perinephric	5			
Incision and drainage			4	
Urinary extravasation			1	
Hematuria				
Nephrectomy		1 1		
Transfusion			1	
Hydronephrosis	1			
Infection of kidney (hæmatogenous)			4	
$Exploration \dots \dots \dots \dots$			1	
Nephrelithiasis				
Nephrolithiasis		1	3	
Nephrectomy			$\begin{bmatrix} 3 \\ 2 \end{bmatrix}$	
Pyelotomy			2	
Nephroptosis	I.			
Pyelonephritis	$\frac{3}{2}$			
Nephrectomy			1	
			110	

D. C.	Diagnoses		OPERATIONS	
Diseases and Conditions	Total	Deaths	Total	Deaths
Pyonephrosis	6			
Nephrectomy			3	
Rupture of kidney				
Nephrectomy			1	
Tuberculosis			2	
Uræmia	1		2	
Ureter				
Calculus	11			
Nephrotomy			2	
Excision of ureter		1	11	
Ureterotomy			5	
Stricture of ureter	. 1			
Ureterotomy	.			
Urethra				
Abscess, perineal				
Extravasation of urine		1		
Drainage				171
Fistula				
External urethrotomy		1	1	
Stricture of urethra			1	
Cystotomy, suprapubic				
Excision of band at urinary meatus		- 1	11 7	
Exploration			-	
Perineal prostatectomy			11	
Urethrotomy			11 7	
Urethritis	1			
Tumor				
Caruncle	. 1			
Excision			1	
MISCELLANEOUS INJURIES				
Abrasions	. 3			
Amputation of leg (traumatic)	. 1	1		
Avulsion of sole of foot				
Burns	- 1	1		
Contusions (various)	. 9			

D Co	Diagnoses		OPERATIONS	
Diseases and Conditions	Total	Deaths	Total	Deaths
Rupture of wound (post-operative)	1			
Gunshot			2	
Infected	2		2	
Lacerated			5	
FINAL TOTAL	2366	89	1526	72

# Summary of Statistics

# JANUARY I, 1915-DECEMBER 31, 1915

Total number of surgical admissions in 1915 Surgical cases remaining in wards, Jan. 1, 1915	1783 86
	1869
Total number of surgical cases discharged in 1915	1780
Cases remaining in wards Jan. 1, 1916	89
	<del></del>
	1869
Total number of cases discharged relieved	1691
Total number of deaths	89
Total number of surgical cases discharged in 1915	1780
Cases remaining in wards Jan. 1, 1916	89
	1869

## **Fatalities**

1. Repair of Fractured Patella. 3017.

Male, 39 years, alcoholic. Eight days before entrance fracture of right patella. Entered hospital pallid, nervous, tremulous. Observation for two days before operation. Operation. Ether (Connell). Repair of patella without incident. Light anæsthesia. Good ether recovery. For five days patient very nervous, receiving considerable amounts of alcohol with steady improvement. Chill with sudden onset of right-sided pain. Death two days later.

Autopsy: Showed early pneumonia with acute focal necrosis of liver.

2. Subtemporal Decompression for Fracture of Skull (Basal) with Cerebral Laceration. 3030.

Female, 56 years. Thrown from an automobile against a telegraph pole one hour before entrance. Immediate unconsciousness followed by restless irrational condition. Operation, June 6, 1915. Right subtemporal decompression disclosed a "T" fracture of base with laceration of brain. Unsatisfactory opening on account of cerebral laceration and hæmorrhage from vessels of cortex. Death in thirty-six hours.

Autopsy: None permitted.

3. Exploratory Laparotomy for Thrombosis of Superior Mesenteric Artery. 2483.

Male, 51 years. Indigestion for four years. The day before entrance, sudden severe epigastric pain and vomiting after eating, followed by hæmatemesis and tarry stools. On entrance, condition serious, abdomen distended, with dulness in flanks. Rapid feeble pulse. Leucocytes 25,000. Diagnosis: perforated gastric ulcer. Operation. Ether (drop method). Rapid exploration showed universally distended, almost gangrenous small intestine. Free bloody fluid with foul cadaveric odor. Closure without drainage, as patient was evidently moribund. Death three hours later.

Autopsy: Dissecting aneurysm, proximal portion of superior mesenteric artery. Thrombosis of superior mesenteric artery. Arteriosclerosis. Gangrene of small intestine.

4. Resection of Intestine for Mesenteric Thrombosis. Mesenteric Thrombosis (small intestine). 2784.

Male, 59 years, previously healthy. For six weeks epigastric pain and vomiting, increasing in severity. Admitted as an emergency. Temperature 101.8°, pulse 140, and very feeble. Leucocytes 30,000. Abdomen rigid and distended. Diagnosis: peritonitis from perforated or strangulated viscus. Immediate operation. Novocaine followed by ether. Bloody fluid in abdomen. Impending gangrene of about forty cm. of jejunum; resection. Thrombosis of mesenteric veins, patent

arteries. Ends of bowel brought out of wound. Fair immediate recovery. Death in twelve hours.

Autopsy: None permitted.

5. Excision of Varicose Veins. 3630.

Female, 52 years, in excellent condition. Varicose veins in both legs for many years. Brawny areas of induration in lower right leg associated with very large sclerosed superficial veins. Operation. Ether (Connell method), duration three hours. Excision of varicose veins of both legs. Right internal saphenous vein enormous, walls sclerosed, showing evidence of long-standing previous inflammation, extending above point of division in groin. Excellent recovery. Normal convalescence. Reactionless wound. After first week occasional night sweats. No rise in temperature or pulse. On the eleventh day, while feeling especially well, sudden faintness, dyspnœa, and bluish pallor. Death in fifteen minutes. Probably embolism from diseased vein on right above point of division.

Autopsy: None permitted.

6. Exploratory Laparotomy — Appendicectomy — Clamp and Cautery for Hæmorrhoids. 2751.

Male, 32 years, adipose, pale. Rectal bleeding for two years and atypical gastric symptoms for five years. Operation. Ether (Connell method). Exploration of abdomen negative except for sclerosed appendix, which was removed. Removal of internal hæmorrhoids by clamp and cautery. Some cyanosis, but operation was well borne. Duration 1½ hours. Stormy early convalescence with vomiting and distension. Six days later acute middle ear and lobar pneumonia. Expectoration of much mucous sputum (Mucosus capsulatus?). Death two weeks after operation.

Autopsy: None permitted.

7. Appendicectomy with Drainage for Acute Appendicitis (Abscess). Acute Nephritis. 3824.

Female, 14 years, a foreigner, history difficult to obtain. Right-sided abdominal pain with fever and vomiting for four days, also smoky to bloody urine. (Parents stated later that for years she had had attacks of hæmaturia.) Right kidney large and palpable. Low, right iliac tenderness with slight spasm. Septic temperature, high white count. Observation for four days in view of obscurity of diagnosis. Blood but no casts found in urine. Temperature steadily falling, but patient became sicker on fourth day. Operation. Light ether anæsthetic (Connell method). Appendix gangrenous, retrocæcal, colon bacillus pus about it. Death in two days with suppression of urine. Last specimen straw-colored (no blood).

Autopsy: None permitted. Query: — Antecedent nephritis, or toxic hæmaturia, secondary to appendicitis?

8. Appendicectomy with Drainage for Acute Appendicitis with Peritonitis (Diffusing). 3891.

Male, 30 years, acute abdominal symptoms of three days' duration. Nephrectomy for renal infection 1½ years before. Temperature 103°, pulse 180. White count 28,000. Shallow respirations. Abdomen

distended, rigid, no visible or audible peristalsis. Immediate operation. Ether (Connell method). Shallow respirations, cyanosis. Free abdominal fluid. Appendix entirely gangrenous, inaccessible, removed with difficulty. Drainage. Poor ether recovery followed by fair condition the following morning, good urinary output, less distension, rapid pulse, and high temperature. Death three days after operation. Diffuse reddening of subcutaneous tissues in right gluteal region (œdema of general infection?). Question of pneumonia unsettled.

Autopsy: None permitted.

9. Appendicectomy for Acute Appendicitis with Peritonitis (Local). Enterostomy (Secondary) for Post-operative Obstruction. 3782.

Male, 42 years, adipose, flabby. Acute abdominal symptoms for several days. Moderate elevation of temperature and pulse. Immediate operation. Ether. Marked intestinal distension. No general peritonitis. Appendix gangrenous and perforated lying in the pelvis with much foul pus. Drainage. Persistent distension and vomiting. Six days later enterostomy under local anæsthesia. No definite obstruction found. No evidence of general peritonitis. Good drainage from enterostomy. Gradual failure of pulse without rise of temperature and without distension or evidence of peritonitis. Death thirteen days after first operation.

Autopsy: None permitted.

10. Appendicectomy with Drainage for Acute Appendicitis with Peritonitis (Diffusing). Secondary Drainage of Residual Pelvic Abscess. 3729.

Male, 9 years, previously healthy. For two days before entrance acute abdominal symptoms. Moderate fever. Low white count. Boardlike, flat, generally tender abdomen. Operation. Ether (Connell method). Cyanosis, relieved by oxygen; free purulent fluid in abdomen, intestines reddened, semi-gangrenous appendix removed, — drainage. Slow improvement. Fifteen days later residual abscess in pelvis, drained under gas-oxygen ether anæsthesia. Sudden arrest of pulse and respirations. Cardiac massage unavailing. Death.

Autopsy: None permitted.

11. Appendicectomy with Drainage. Acute Appendicitis with Peritonitis (General). 3369.

Female, 57 years, acute abdominal symptoms for two days. Rigid distended abdomen, slight fever, and low white count. Immediate operation. Ether (Connell method). Abdomen full of colon bacillus pus. Intestines everywhere red and covered with fibrin. Gangrenous appendix. Appendicectomy with pelvic and right flank drainage. Death in thirty-six hours with distension and high temperature.

Autopsy: None permitted.

12. Appendicectomy for Acute Appendicitis with Peritonitis (General). 3412.

Male, 35 years. Abdominal symptoms for seven days, more acute for three days. Constipation. Temperature 101°, pulse 110; white count 10,000; abdomen generally tender with evidence of free fluid. Obser-

vation until the following day, when condition was if anything better—normal temperature and pulse. No result from several enemata. No definite diagnosis made. Operation. Ether (Connell method), poorly taken with rigidity and cyanosis. Median incision. Intestinal protrusion. Abundant free foul colon bacillus fluid. General peritoneal involvement. Gangrenous pelvic appendix removed. Ileostomy necessary to replace intestine. Irrigation of peritoneal cavity. Pelvic drainage. Death in two days, after gradual rise of temperature to 108°.

Autopsy: None permitted.

### 13. CLOSURE OF FÆCAL FISTULA. 2152.

Male, 27 years. Phthisis for five years. Operation elsewhere for acute appendicitis three months before entrance resulting in fæcal fistula. Tissue from the fistulous tract proved to be tuberculous. Operation. Ether. Fistulous tract dissected out and opening in thickened cæcal wall closed by inversion. Early re-establishment of fistula. Operation. Ether. Three weeks later, resection of cæcum, with lateral ileocolostomy. The cæcum showed inflammatory thickening but no tuberculosis. Death in two days with vomiting and evidence of respiratory difficulty.

Autopsy: Old pulmonary tuberculosis with extensive miliary involvement of both lungs. General peritonitis. Anastomosis tight. No tubercular disease of intestine.

### 14. Ileostomy for Ileus; Acute Intestinal Intoxication. 3621.

Male, 21 years. Brief history of violent epigastric pain and vomiting after apparently innocuous meal. No previous illness of the same kind. Normal temperature and pulse on entrance to hospital. Expectant treatment for twenty-four hours. Good results from enema, but increasing small intestine distension and rise of temperature and pulse. Diagnosis: subacute intestinal obstruction from band, Meckel's diverticulum or internal concealed hernia. Operation. Ether with novocaine. Free fluid. General small intestine distension found without obstruction. Ileostomy. Patient bore operation well, but pulse and respiration rose rapidly within a few hours, and he died about six hours after operation.

Autopsy: Medicolegal — "Œdema of the brain and lungs, and status ileus, due to causes unknown." The examiner offered the suggestion that the condition might conceivably have arisen from sudden deprivation of morphia.

# 15. Release of Ileocæcal Adhesions for Intestinal Obstruction. 2659.

Male, 38 years. Two months before entrance patient was operated upon at another institution for acute appendicitis. Drainage. Healing in about five weeks. Soon after healing patient became very constipated, and began to have severe right-sided abdominal pain. Chills, fever, and distension for the last three weeks. Rapid emaciation. Jaundice (?) for six days before entrance. Kept in hospital one night before operation. Bowels moved with enemata. Given subcutaneous saline. Temperature elevated. White count 60,000. Area of dulness in right back suggests pneumonia or pleuritic effusion. Signs of free abdominal fluid. Operation. Novocaine followed by light ether anæs-

thesia. Abundant free fluid in abdomen. Marked kinking and adhesion of terminal ileum. Adhesions separated. Fair recovery. Slight general improvement for two days. Thoracentesis negative. Increasing fever and white count. Taking nourishment well. Bowels move freely. Death seven days after operation.

Autopsy: None permitted. Cause of death possibly liver abscess.

16. Gastroenterostomy and Plastic Occlusion of Pylorus for Duodenal Ulcer(?). Transduodenal Bands. 2803.

Male, 41 years, with a history of indigestion for twenty years suggestive of a duodenal ulcer. For the last five years a number of attacks of fainting of unknown origin (not accompanied by intestinal hæmorrhage). A stout, thick-necked, rather pale man without discoverable abnormality of heart or lungs. Operation. Ether (Connell method). Gastroenterostomy with plastic occlusion of pylorus. Scar on duodenum thought to be an old ulcer. Duodenum fixed by transduodenal bands from liver to pylorus. A long operation (about  $2\frac{1}{2}$  hours), the abdominal closure being very difficult and slow. Frequent periods of apnœa during anæsthesia. Otherwise condition good throughout anæsthesia. Excellent immediate ether recovery, but six hours after operation sharp rise of pulse, temperature, and respiration with cyanosis. Death three days later of broncho pneumonia.

Autopsy: Acute broncho pneumonia. No evidence of duodenal ulcer. No operative accident demonstrable in abdomen.

### 17. Colostomy for Carcinoma of Sigmoid. 3389.

Female, 63 years, who had in previous years at another institution undergone a number of gynæcologic operations which had left a ventral hernia. Pain in hernia for a year. Marked constipation for six months. Distension of abdomen of three weeks. Vomiting for a week. Diagnosis: obstruction from old adhesions. An obese elderly woman with distended abdomen. Operation. Ether (Connell method). Light anæsthesia badly taken. Patient cyanotic throughout. Difficult entrance to abdomen through adhesions about hernia in scar. Mass of adhesions in pelvis. Partial evisceration of distended bowel. Carcinoma of sigmoid adherent low in pelvis. Colostomy (tube tied into bowel). Fair ether recovery. Rapid failure and death twelve hours after operation.

Autopsy: None permitted.

### 18. Colostomy for Carcinoma of Sigmoid. 3627.

Male, 53 years, who has had pain in left lower abdomen for eighteen months. Alternating diarrhea and constipation. One year ago, exploration at another institution with diagnosis of inoperable carcinoma of sigmoid (no specimen removed). No change in condition up to entrance to hospital. Patient well nourished, no distension. A hard mass in lower left quadrant. It was thought that if the patient's condition for the last eighteen months had been due to carcinoma he should have deteriorated. Exploration advised on basis of a possible mistake of carcinoma for diverticulitis. Operation. Ether (Connell method). Satisfactory anæsthesia. Difficult approach to tumor through massive adhesions. Accidental opening into tumor mass and bowel lumen (Speci-

men — Pathological report "adenoma-carcinoma"). Sigmoid divided above and distal end closed. Proximal end brought out through wound and abdomen drained. Death on fourth day with abdominal pain and distension.

Autopsy: Intestinal obstruction (small intestine) from adhesions due to local peritonitis in pelvis.

19. Tamponade of Ruptured Liver. Subsequent Cholecystostomy for Empyema of Gall Bladder. Transfusions on Three Occasions for Recurring Hæmorrhage from Liver. 2244.

Male, 13 years. Run over by an automobile shortly before entering hospital. Evidence of intracranial injury also with dulness of flanks, pallor, and thirst. Watched in operating room for two hours and diagnosis of ruptured liver made. 3½ hours after injury — Operation. Ether (Connell method). Smooth anæsthesia. Enormous rent in median line of liver with considerable extravasation of blood from several large open-mouthed veins. Gauze packing. Immediate transfusion. Following operation gradual improvement. Cerebral signs gradually disappeared. Profuse discharge of bile from packing accompanied about a week after operation by a rise of temperature. Hæmorrhage followed attempt to remove pack. Gradual failure until, two weeks after first operation, a second operation was performed for empyema of gall bladder. Improvement followed by successive violent hæmorrhages from liver, requiring two transfusions, the last after an attempt to remove the packing in the torn liver and replace it with muscle grafts. Death thirty-six days after injury.

Autopsy: Traumatic rupture of liver with acute necrosis of liver. No peritonitis. Terminal infection of liver with bacillus aerogenes capsulatus. Ex-sanguination of organs in general.

20. Cholecystostomy for Acute Cholecystitis. 2730.

Female, 59 years. Symptoms of acute cholecystitis for three days. An obese woman, dyspnœic and cyanotic. Heart enlarged. Diffuse bronchitis. Operation. Novocaine followed by light ether for closure. Drainage of acute cholecystitis. Small intestine distended. Cloudy fluid in abdominal cavity. Six days later death from pneumonia.

Autopsy: None permitted.

21. Cholecystectomy for Chronic Cholecystitis — Chronic Pancreatitis. 2429.

Female, 62 years. Attacks of pain in right upper quadrant radiating to shoulder blades on and off for twenty years. Operation at another institution two years ago for "gall stones." No stones found (gall bladder not opened) and appendix removed. Relief of pain for a year. For the last year attacks of pain and vomiting similar to previous have recurred more frequently. Patient is an obese woman. Heart and lungs negative. No tenderness or masses in abdomen. Operation. Ether. Cholecystectomy, division of adhesions about pylorus and duodenum. Head of pancreas unusually hard and considerably thickened. An operation of about one hour, apparently well borne by the patient. Pathological report: chronic cholecystitis. Good immediate convalescence. Death apparently from acute heart failure on the beginning of the third day after operation.

Autopsy: None permitted. Husband reported after patient's death that she had had several fainting attacks with cardiac pain during the last few years.

22. Cholecystectomy for Cholecystitis. Repair of Post-operative Hernia. 2640.

Male, 55 years. Alcoholic history. History of indigestion for fifteen years. Thirteen years ago a severe attack of pain in the right upper quadrant. Severe paroxysmal pain in right upper quadrant for three weeks before entrance. An obese elderly man; slight jaundice. Enlarged tender gall bladder. General emphysema and chronic bronchitis. Operation. Ether (Connell method, followed by drop method). Generally satisfactory anæsthesia lasting 13/4 hours. Delay in early part of operation owing to incomplete relaxation. Condition good through-Cholecystectomy for subacute cholecystitis. Common duct drained. It was tense with tough black tenacious material which was expressed. No stones in any of bile passages. Wound closed in layers with chromic catgut and drained with rubber tissue. Excellent recovery from ether. Moderate bronchitis and cough for four days. Wound opened spontaneously on fourth day during violent coughing. Repair of wound and replacement of bowel under ether. Death two days later with evidence of bronchopneumonia.

Autopsy: Diffuse bronchopneumonia. Emphysema. Fatty liver and kidneys.

23. Cholecystectomy; Freeing Perihepatic Adhesions for Chronic Cholecystitis and Portal Obstruction (Post Operation); Hypertrophic Liver. 2795.

Female, 57 years. Two previous operations for gall stones within six' months at another institution: the first, cholecystostomy with removal of stones; the second, transduodenal removal of stone in lower end of common bile duct. Good health until two weeks before entrance, when swelling appeared in epigastrium and patient became unable to eat. No food for two days before entrance. On entrance patient presented picture of starvation with great enlargement of liver and acidosis. Signs of free fluid in abdomen. Operation. Gas oxygen, novocaine, plus ether. Liver enormous and lower border kinked by adherence to transverse scar of former operation. Adherent gall bladder deforming duodenum. Free bloody fluid in abdomen. Cholecystectomy—freeing lower border of liver, which was evidently undergoing some profound metabolic disturbance. Immediate operation well borne, but patient died within two hours with evidence of a profound toxic disturbance.

Autopsy: None permitted.

24. Cholecystectomy. Choledochostomy for Chronic Cholecystitis, Cholelithiasis, and Cholangitis. 3183.

Female, 60 years, with a history of painless jaundice for about a year. During the last few months before operation the jaundice had varied in severity, the temperature had frequently been elevated and recently she had had chills with sudden accessions of fever. Patient was in general in good condition, but presented a bleached, slightly dusky yellow color.

Diagnosis: common duct stone of long standing with cholangitis. Operation. Ether (Connell). Duration of etherization, 1¼ hours—light throughout. Cholecystectomy and common duct drainage. Common duct filled with foul thick brownish material dotted with fine black fragments of stone. Duct washed clean. Head of pancreas large and opening of common duct into intestine sclerosed and narrow. Drainage of common duct. Excellent recovery from ether. Death twenty-three days after operation. No bile in stools. All bile through sinus. Gradual failure.

Autopsy: Common bile duct and larger hepatic ducts contain greenish pasty material loaded with bacteria. Several small stone fragments in ducts similar to operative specimens.

### 25. Cholecystectomy — Choledochotomy for Cholelithiasis. 3499.

Male, 57 years, who was operated upon at another institution about four years before for empyema of the gall bladder with cholelithiasis. One large stone removed and gall bladder drained. Attacks of severe right upper quadrant pain accompanied by jaundice and requiring morphia for last six months. On entrance to the hospital he was found to have glycosuria and was discharged with dietary instructions. Returned in ten days sugar free. Several attacks in mean time, the last accompanied by a chill and jaundice. Patient concealed the fact that he had been given ether by his son during this attack and that following it he had some difficulty in breathing. Very obese. Hernia in scar. Fine rales in lungs. The danger of operation was urged upon the patient, who demanded it. In view of the patient's recent chill and the increasing severity of his attacks, it was felt that immediate operation might be less dangerous than delay. Operation. Ether (Connell method). Anæsthesia satisfactory throughout. Pulse generally 80 to 100. Repair of hernia. Removal of much thickened gall bladder. Drainage of dilated common duct which contained thin cloudy bile. Excessive amount of fat everywhere prevented accurate examination of lower end of common duct. No stones felt with probe. Drainage of common duct. Good recovery from operation. Rise of temperature, pulse, and respiration the same evening. Death from acute bronchopneumonia on the fourth day after operation.

Autopsy: Acute hæmorrhagic bronchitis and bronchopneumonia. Dilated inflamed common duct containing stones (not discovered at operation).

# 26. Exploratory Laparotomy for Carcinoma of Gall Bladder—General Peritoneal Carcinomatosis. 3551.

Female, 40 years. Entered hospital with complaint of abdominal pain and vomiting for six weeks. Abdomen somewhat distended especially over pelvis. General tenderness prevents accurate examination. Temperature irregularly elevated. Exploration under diagnosis of peritoneal tuberculosis or general carcinomatosis. Operation. Novocaine. Peritoneal cavity contains at least three liters of fluid. Carcinomatous masses in pelvis, in omentum, and in right upper quadrant. Fluid slowly evacuated and abdomen closed. Death in six days without new symptoms.

Autopsy: Carcinoma of gall bladder which contains many stones. General peritoneal carcinomatosis.

27. Exploratory Laparotomy. Rupture of Mesentery (Traumatic). 3777.

Male, 3 years. Struck by an automobile an hour before entrance to hospital. Brought in pulseless in intense shock. Diagnosis of injury to back and abdomen. Immediate improvement under stimulation; then rapid deterioration with signs of unlocalized hæmorrhages. 1½ hours after entrance abdominal exploration which did not require anæsthesia. No free blood found in abdominal cavity, but enormous retroperitoneal extravasation thought to be due to ruptured mesenteric vessels. Death on the table.

Autopsy: None permitted.

28. Exploratory Laparotomy with Drainage for General Peritonitis. Perforation of Carcinoma of Rectum. 4020.

Female, 54 years, brought to the hospital as an emergency case after a ten days' illness characterized by general abdominal pain (starting from left lower quadrant), intestinal obstruction, and fæcal vomiting. A diagnosis of obstruction made. Patient in very poor condition with only moderate rise of pulse and temperature. Immediate operation. Novocaine. Midline incision. Fæcal pus coming from pelvic region. General peritonitis of advanced grade. Drainage. Perforation not formed. Death in about twelve hours.

Autopsy: Showed an anterior perforation of a low rectal carcinoma.

29. Gastrostomy for Carcinoma of Esophagus. 2294.

Male, 55 years, who had suffered from difficulty of swallowing for several months. At entrance had retained no nourishment for three days. Extreme emaciation. Operation. Novocaine. Wetzel gastrostomy. A mass of cancerous glands felt just below the diaphragm. Satisfactory feeding for about three weeks. Foul discharge into stomach from œsophagus. Sudden intense abdominal pain on twentieth day. Death in two days from general peritonitis.

Autopsy: Carcinoma of esophagus. Perforation from extension of growth into lesser peritoneal cavity. General peritonitis.

30. Gastrostomy for Carcinoma of the Œsophagus. 3521.

Male, 57 years, previous entry on Medical Service, suffering from pain in swallowing and hoarseness for six weeks. Pain only had prevented swallowing. No regurgitation. Had lost eighteen pounds. Patient found to have an enlarged aorta and paralysis of left vocal cord. The patient was discharged improved in ten days. Re-entered Medical Service four weeks later having lost nearly fifty pounds. For last six days increasing difficulty in swallowing. For three days has swallowed nothing. Transferred to Surgical Service. Operation. Novocaine. Witzel gastrostomy. Death in five days.

Autopsy: Perforation of esophageal carcinoma into bronchus. Bronchopneumonia.

31. Cholecystostomy — Acute Hæmorrhagic Pancreatitis. 3200.

Female, 51 years, who had undergone an extensive pelvic operation in this hospital one year ago. Since her discharge she had suffered from occasional attacks of epigastric pain accompanied by vomiting. 24 hours

before entrance a similar attack which rapidly increased in severity, pain spreading over entire abdomen. Vomiting. A sick, elderly woman, general abdominal tenderness. No rigidity. Normal temperature. White count 24,000. Diagnosis: Intestinal obstruction associated with hernia in median laparotomy wound. Operation. Ether (Connell method). Satisfactory anæsthesia. Exploration of median abdominal scar proved negative. Blood-stained fluid in abdomen — fat necrosis. Pancreas dark red, and ædematous. Gall bladder contained stones. Drainage of gall bladder. Lesser peritoneal cavity drained. Death six hours after operation.

Autopsy: None permitted.

32. Exploratory Laparotomy. Carcinoma of Pancreas. 3031.

Male, 42 years. Entered hospital three months after onset of painless jaundice. Marked loss of weight. An emaciated man. Deep jaundice with pigmentation. General appearance suggestive of malignant disease. Enlarged liver. Palpable gall bladder. Diagnosis of neoplasm at head of pancreas. Operation. Novocaine. Abundant ascitic fluid. Tense gall bladder. Large mass in region of head of pancreas. Cholecystenterostomy considered inadvisable. Good recovery from operation. Steady failure. Death about one month later.

Autopsy: Carcinoma of pancreas.

33. CÆCOSTOMY. LATER COLECTOMY WITH ENTEROCOLOSTOMY. INTES-TINAL OBSTRUCTION. CARCINOMA OF SIGMOID. 2917.

Female, 58 years, who has been subjected previously to the following operations: Removal of ovarian cyst; Repair of ventral and inguinal hernia; Repair of femoral hernia; Exploration of gall bladder; Gastroenterostomy. Immediate symptoms: subacute intestinal obstruction for two weeks, absolute obstruction for one week (violent catharsis) Patient is an obese elderly woman, not apparently very sick. Assymetrical distension of the abdomen (principally in the right and median). No free fluid. Vaginal and rectal examinations negative. Operation. Novocaine followed by ether — drop method. Enormous, thick-walled cæcum found. Dilatation seemed to end at hepatic flexure as if bowel were tied down by adhesions in gall bladder region. Exploration showed normal feeling transverse and descending colon, and small sigmoid. Cæcostomy by Mixter tube. Recovery. Bismuth enemata negative (rectum and sigmoid only outlined). Operation — one month later (patient had obviously deteriorated). Ether (drop method). Resection of cæcum, ascending, and beginning of transverse colon. Lateral anastomosis (ileum to transverse colon). Good operative recovery. Death in two days without important abdominal symptoms. High temperature.

Autopsy: Partial. Local pelvic peritonitis. Early carcinoma of lower sigmoid with perforation but without obstruction. (Exact cause of cæcal condition undetermined.)

34. (1) Partial Gastrectomy for Carcinoma (Polya) and (2) Anterior Gastrojejunostomy for Carcinoma of Stomach. 3223.

Female, 65 years. Gastric symptoms for ten years. Gastric hæmorrhages for three months. In general, a well-preserved woman who appeared to have failed in strength recently. Operation. Ether (Connell

apparatus). Stomach found inflated with gas, necessitating aspiration, which was accomplished without soiling. Extensive involvement of lesser curvature by an old ulcer. Large lymph glands in gastrohepatic omentum. Gastrectomy performed with inversion of end of duodenum and anastomosis of proximal end of stomach to jejunum through transverse mesocolon (Polya operation). At close of operation the jejunum seemed rather sharply angulated and drawn up rather high. Patient bore operation well. Excellent early convalescence followed by vomiting of bile and failure to retain any nourishment. Steady decline in strength. Operation. Novocaine. Anterior gastrojejunostomy. Lower end of stomach found closed. Induration and contraction of gastric opening in region of transverse mesocolon. Death from inanition nine days after second operation and thirty-three days after gastrectomy.

Autopsy: None permitted.

35. Transphenoidal Exploration for Acromegalic Gigantism with Tumor. 1784.

Male, 38 years. Long history of hypophyseal disease and almost total blindness. Severe headaches. A transphenoidal operation three years before with temporary benefit. Operation I. Sept. 24, 1914. Subtemporal decompression. No improvement. Further progress of symptoms with increasing headache. Operation II. Feb. 15, 1915. Attempted secondary transphenoidal operation with evacuation of sellar contents. Death on the following day.

Autopsy: Adenoma of hypophysis with marked intracranial extension. General lymphoid changes. Gigantism.

36. Repair of Right Inguinal Hernia. Inversion of Hydrocele. Double Inguinal Hernia. Hydrocele. 3812.

Male, 57 years. Advanced cardio-renal disease. History of moderate alcoholism. Operation. Novocaine (local). Repair of the large hernia and hydrocele without difficulty. After operation usual evidences of delirium tremens. Low urinary output. Death five days after operation, with amelioration of symptoms.

Autopsy: None permitted.

37. Repair of Umbilical Hernia. 3997.

Female, 44 years, with a history of chronic cough for three years. During this time dyspnœa at night; sleep in semi-reclining position with windows open. Has been dieting to lose weight. Umbilical hernia for twelve years with minor symptoms suggesting partial strangulation. A well-developed and nourished woman. Color good. Area of cardiac dulness considerably enlarged. Systolic murmur. Umbilical hernia the size of a hen's egg (on coughing). Opinion of Medical Service asked as to cardiac condition. Answer (summary only quoted): "Impression, some degeneration of myocardium. All right for ether." Operation. Ether (drop method). Total period under ether one hour. Duration of operation one hour, a satisfactory overlapping operation without incident. Patient placed in semi-recumbency after operation. Good ether recovery. Death in forty-eight hours with evidence of bronchitis and cardiac weakness.

Autopsy: Bronchopneumonia. Mitral stenosis. Dilated right ventricle and left auricle.

38. Intestinal Resection and Anastomosis for Strangulated Umbilical Hernia. 2678.

Female, 53 years; umbilical hernia for many years. Partial strangulation several times during the last year. Strangulation for two days before entrance. A very sick woman. Rapid respirations and pulse. Operation. Novocaine. Resection of gangrenous loop of small intestine, and of necrotic omentum. Lateral anastomosis. Closure with drainage. Death without change in symptoms several hours after operation.

Autopsy: None permitted.

39. Incision and Drainage for Abscess of Shoulder (Septicæmia). 3639.

Male, 15 years, who injured right shoulder two days before entrance. Six days before entrance pain in region of bruise; became drowsy and tired. Steady increase in intensity of same symptoms up to entrance. A pale, sick-looking boy, stuporous. Respirations rapid and labored. Redness, swelling, and tenderness over right scapula. Slight swelling of right elbow. A fine granular rash over the thorax and abdomen. Temperature 104.4°, pulse 120, respirations 60. X-ray negative. White count 6,500. Operation. Gas-oxygen. Aspiration, followed by incision and drainage of large cavity beneath supraspinatus muscle. Cavity contained pale brownish material. Culture, staphylococcus aureus. Steady decline and death in three days.

Autopsy: Medical Examiner's report: "Acute focal pneumonia, multiple abscesses of lungs, and septicæmia, secondary to abscess of the back (scapula) consequent on an accidental fall (football)."

40. Cæcostomy. Myomectomy. Chronic Dysentery. Syphilis. Myomata of Uterus. 3067.

Female, colored, 35 years. History suggests syphilis. Wassermann reaction strongly positive. Entered hospital on Medical side complaining of very frequent movements for two months. Severe tenesmus. Blood and mucus in stool. No notable improvement under medical treatment with administration of salvarsan. No parasites found in stool. Transferred to Surgical Service for treatment of sensitive pelvic mass thought to be chronic salpingitis, possibly of tubercular origin. Exploration. Ether. Small fibroid adherent to sigmoid removed. Intestines appeared and felt normal. Cæcostomy performed for irrigation of lower intestine. Moderate improvement following nitrate of silver injections. About a month after operation sudden failure and death with rapid pulse preceded by no other abnormal signs than some mental disturbance.

Autopsy: Gummata of liver. Extensive intestinal ulcerations more noticeable in small than large intestine. No involvement of lymphoid tissue. No accurate estimate of cause of death. No operative accident demonstrated.

41. Multiple Incisions, Arthrotomy for Pyæmia and Septic Arthritis. 2741.

Female, 10 years, who had previously been treated in this hospital for chorea and acute endocarditis. Two weeks before present entrance patient had left this hospital convalescent from tonsillectomy. Con-

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tinued to have pain in region of tonsils and difficulty of swallowing. Chill six days ago followed by appearance of areas of subcutaneous hæmorrhages and swelling of several fingers and toes. Transferred from Medical Service with diagnoses of septicæmia and septic arthritis. Operation. Ether (drop method). Rapid drainage of right ankle and elbow. Culture shows streptococcus. Death in six days without improvement at any time.

Autopsy: Multiple arthritis. Subacute endocarditis. Diphtheritic œsophagitis.

42. Multiple Incisions of Leg for Cellulitis — General Septicæmia. 2822.

Male, 39 years. Five days before entrance patient bruised left shin. Walked about for two days, increasing pain and swelling. Vomiting and involuntary movements for twenty-four hours. A very sick man. Temperature 103°, pulse 140, respirations 40. Continuous involuntary defecation and vomiting. Right leg below knee purplish-red, ædematous, and tender. In center is a superficial abrasion. Immediate operation. Gas-oxygen. Satisfactory anæsthesia. Multiple incisions. Thin odorless pus. Temperature rose to 108° in three hours and the patient died.

Autopsy: Medical Examiner reports "Lymphangitis of leg with resulting septicæmia."

43. Repair of Lacerated Suprapatellar Tendon. Rupture of Suprapatellar Tendon. 2270.

Male, 70 years. Rupture of quadriceps tendon by falling on knee. Remained with leg immobilized for nine days. Patient well preserved, in good condition. Heart and lungs negative. Operation. Ether (Connell method). Light anæsthesia. Repair of capsule and tendon. Good recovery. Eight days after operation, while in bed, complained of sudden sharp precordial pain resembling angina. From this time until death nineteen days later nothing remarkable was found on physical examination except that the heart sounds were weak and distant. Free perspiration. Sudden failure.

Autopsy: None permitted. Death attributed to myocarditis.

44. Puncture of Frontal Lobe Abscess — Removal of Bone — Drainage of Abscess. 2293.

Male; 23 years, who had been operated upon several times at other institutions during the four months preceding his entrance. At these operations an opening had been made through the frontal bone and on one occasion the dura had been opened. On entrance he gave evidence of cerebral abscess with symptoms of markedly increased intracranial pressure. Bare necrotic bone in frontal region. Operation I. Jan. 5, 1915. Abscess in frontal lobe drained. No improvement. Operation II. Jan. 9, 1915. Removal of bone and drainage of several abscesses in frontal lobe. Improvement followed by herniation of brain and extrusion of several intact abscess sacs. For a week his improvement continued, after which his condition steadily deteriorated, and he died six weeks later from meningitis.

Autopsy: Not permitted.

45. Cerebellar Exploration. Cerebellar Apoplexy. 3655.

Female, 43 years. Entered hospital in second attack within six months suggestive of a cerebellar lesion. Operation, Oct. 8, 1915. A suboccipital exploration performed without accident. Negative findings. Good recovery from operation. General improvement until twelve days after operation, when sudden stupor and cessation of respiration occurred. Death.

Autopsy: Intracerebellar apoplexy with scar of a previous hæmorrhage.

46. Subtemporal Decompression (Left) for Intracranial Subdural Hæmorrhage (Post-traumatic). 2279.

Female, 68 years. Slipped and fell, striking her head three days before entrance. She became unconscious on a train two hours later. Sent here from Rhode Island Hospital. On entrance slight twitching of right side and transient aphasia lead to suspicion of left-sided hæmorrhage. Optic discs hazy. Cheyne-Stokes respiration. Operation, Dec. 31, 1915. Left subtemporal decompression. Right brain. Dry. No hæmorrhage. Temporary improvement followed by deepening coma and death one week after operation with evidence of terminal bronchopneumonia.

Autopsy: Extensive subdural clot covering large part of right hemisphere.

47. Subtemporal Decompression. Osteoplastic Exploration. Blastomycotic Meningitis. 2055.

Male, 39 years. Hemiplegia (right) six weeks before entrance. Salvarsan was twice administered. Drowsiness for six weeks. On entrance, right-sided paresis. Choked discs. Negative Wassermann reaction. Operation I. Nov. 13, 1914. Left subtemporal decompression. Tense brain. Ether poorly taken. Continued drowsiness. Decompression tense. Spinal puncture showed red blood corpuscles but no lymphocytes or leucocytes. Operation II. Dec. 4, 1915. Osteoplastic exploration. Brain gave impression of cerebral thrombosis. Hydrocephalus demonstrated. Death about one month later. Slight rise of temperature a few days before death. Otherwise no new symptoms. Always drowsy. Autopsy: Torula infection of lung (old). Torula infection of brain. Metastasis in liver and spleen. (Reported by Stoddard and Cutler.)

48. Laminectomy. Tubercular Meningitis (Chronic Cervical). 2890.

Male, 32 years. Several months before patient had undergone nephrectomy (right) for tuberculosis and as a complication had had a severe suppurating phlebitis of the left leg requiring multiple incisions. Return to hospital several months after apparent recovery with painful spastic left leg. Gradual development of evidence of tubercular process involving lower cervical vertebræ with extension into meninges involving the cord. Operation. July 31, 1915. Laminectomy. Thickened dura and arachnoid over lower cervical region extending down cord. Dura left open. Wound closed. Slight immediate improvement followed by gradual deterioration with increase of paralysis below the neck. Loss of sphincter control. Decubitus. Death one and one half months after operation.

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Autopsy: Pulmonary tuberculosis. Tubercular abscess extending from lung into vertebral column. Caries of lower cervical vertebra. Tubercular spinal meningitis. Multiple decubitus ulcers.

49. Subtemporal Decompression. Polycythæmia. Arteriosclerosis and Cerebral Thrombosis. 3628.

Male, 55 years. Owing to headaches and recurrent attacks of paræsthesia and weakness of left arm was a brain tumor suspect for many years. Temporary weakness of left arm one month before entrance. For seven days paralysis of left arm and face, paresis of left leg. Patient is drowsy, restless, and irritable. Severe headache. Optic discs show ædema and hyperæmia. Left hemonymous hemianopsia. Blood examination shows polycythæmia. Red count 6,600,000. Hæmoglobin 170% (Sahli corrected). The possibility that all symptoms might be due to arteriosclerosis of cerebral vessels associated with polycythæmia was considered, but in view of profound headaches together with history of repeated attacks involving the left side of the body decompression as a preparation of exploration was held to be advisable. Operation. Oct. 4, 1915. Subtemporal decompression (right). Ether (Connell Tendency to Cheyne-Stokes breathing during operation. method). Intracranial tension. Œdematous cortex. No return of consciousness and death three days later.

Autopsy: Polycythæmia. Hyperplasia of bone marrow. Obliterative endarteritis of cerebral arteries with recent thrombosis. Areas of cortical degeneration. General arteriosclerosis. Thrombosis of coronary arteries.

50. Subtemporal Decompression. Cerebral Carcinoma (Invading). 2387.

Male, 54 years. A previous operation (five weeks before) had been performed at another institution for ethmoiditis (thought to be syphilitic), following a history of frontal headaches, failing vision, vomiting, and nasal discharge. On entrance it could not be determined whether the patient had a basilar new growth or an intracranial abscess. Operation. Subtemporal decompression (right). Tense brain. No hydrocephalus. Patient never recovered consciousness and died with very high temperature on the following day.

Autopsy: Carcinoma of ethmoid region with extension into brain. Abscess formation in this metastasis. Early lobar pneumonia.

51. THREE-STAGE OPERATION FOR REMOVAL OF CEREBRAL TUMOR (ENDOTHELIOMA). 2959.

Female, 32 years, with a median cranial osteoma overlying an endothelioma. Right-sided weakness and aphasia. Operation I. May 31, 1915. Flap turned down over tumor and gutter cut through thick skull about the tumor. Bone very vascular and much loss of blood. Scalp replaced. Slow recovery. Operation II. June 15, 1915. Area of vascular bone overlying tumor removed. Immediate application of muscle transplant to check violent hæmorrhage. Transfusion from husband. Good immediate recovery, but unsatisfactory condition during next three weeks. Husband's blood and patient's found to mutually hæmolyze. Patient anæmic. Transfused from sister (no hæmolysis of agglutination)

without improvement. Temperature elevated. Attempted removal of tumor decided on. Operation III. July 8, 1915. Continuous rectal saline. Transfusion from sister. Large enucleable tumor rapidly removed from parasagittal region. Muscle transplant to check bleeding. Good recovery. Condition much improved at first in every way. Ten days later death with evidence of blood changes (blebs and swollen areas in subcutaneous tissue).

Autopsy: Head only. No local infection. Satisfactory healing.

52. Subtemporal Decompression for Cerebral Tumor — Frontal Endothelioma. 3733.

Male, 57 years. History of dizziness and epileptiform convulsions for seven years. Marked increase of intracranial tension. Diagnosis of frontal lobe tumor?. Operation. Oct. 26, 1915. Subtemporal decompression (right). A bloody difficult operation. Brain tense. Convolutions flattened. Good recovery from operation. Death eight hours later in a convulsion.

Autopsy: Endothelioma of brain (right frontal). General arterio-sclerosis.

53. Suboccipital Exploration and Decompression. Brain Tumor (Temporal Lobe). 2690.

Male, 47 years. Symptoms extending over four months suggestive of brain tumor with marked increase of intracranial tension. Operation. April 2, 1915. Under a mistaken diagnosis a suboccipital exploration was carried out with negative findings. Death on second day following increasing stupor.

Autopsy: Large temporal lobe glioma. Marked medullary pressure cone.

54. Craniotomy with Decompression for Brain Tumor. 2820.

Female, 40 years, who entered hospital in a stuporous condition with a history suggestive of brain tumor for at least six months. On entrance she was hemiplegic, unconscious, unable to swallow, and there were involuntaries. Operation. April 24, 1915. Combined exploration and decompression. No tumor disclosed. Death in three days.

Autopsy: Diffuse glioma of right hemisphere. Streptococcus meningitis.

55. Partial Extirpation of Cystic Glioma of Right Cerebral Hemisphere. 3796.

Female, 43 years. Previous right subtemporal decompression for unlocalized cerebral tumor in July, 1915. Two weeks before readmission a recurrence of vomiting and difficulty of deglutition. Shortly before readmission several needle punctures had been made through former decompression opening resulting in some hæmorrhage. Operation. Nov. 1, 1915. Partial removal of a large gliomatous cyst and a portion of a very large deep glioma. Closure without incident. Operation well borne. Five days after operation patient much brighter. Sudden death on sixth day.

Autopsy: Extensive glioma.

## REPORT OF THE SURGEON-IN-CHIEF

56. VENTRICULAR PUNCTURE. BRAIN TUMOR — UNLOCALIZED. 1487.

Male, 22 years. Previous decompression (1913) for unlocalized brain tumor. Recurrence of pressure symptoms. Reëntry in January, 1914. Reëntry July, 1914. Symptoms advancing. Ventricular puncture (local anæsthesia) in August, 1914, repeated on January 4, 1915. Gradual failure and death, January 21, 1915.

Autopsy: None permitted.

57. Suboccipital Exploration for Cerebellar Tumor. 3545.

Female, 42 years. Typical symptoms of an advanced cerebellar lesion, with deglutory difficulty, and dysarthria. Operation. Sept. 22, 1915. Cessation of respiration before second stage of anæsthesia. Under artificial respiration breathing resumed. After all idea of operation had been abandoned, respiration again ceased. Emergency tracheotomy — artificial respiration. Heart sounds strong. No return of natural respiration. Patient again placed on table. Ventricle tapped and cerebellum exposed. Removal of posterior border of foramen magnum, atlas, and axis to free pressure cone of cerebellum. Pressure on medulla released. Tumor (endothelioma) of cerebellum found, but not removed. Closure. No return of spontaneous respiration, though heart continued to beat. On discontinuance of artificial respiration after several hours the heart ceased.

Autopsy: Large cerebellar tumor (endothelioma).

58. VENTRICULAR PUNCTURE AND SUBTEMPORAL DECOMPRESSION. GLIOMA OF III VENTRICLE. 3780.

Male, 4 years. Headache for three months. Loss of vision for four weeks. Vomiting. Convulsions. Evidence of internal hydrocephalus. Localization uncertain. Operation. Nov. 11, 1915. Puncture of right ventricle at Kocher's point, demonstrative hydrocephalus. Right subtemporal decompression. Rapid pulse especially at end of operation. Death in eight hours.

Autopsy: Extensive glioma of third ventricle. Internal hydrocephalus. Pressure deformity of cerebellum.

59. Suboccipital Operation with Extirpation of Cerebellar Tumor.

Perforative Gastric Ulcer. 3055.

Male, 34 years. Well previous to six months before entrance to hospital, when he began to have suboccipital headaches, unsteady gait, failing vision, and vomiting. Examination showed evidence of increased intracranial pressure and of cerebellar tumor. Operation. June 17, 1915. Suboccipital exploration. Enucleable tumor of right cerebellar lobe found and removed. Satisfactory operation, well borne by patient. Good ether recovery. Complaint of abdominal discomfort shortly after operation. Bowel movements contained mucus and a little blood. Abdominal pain in afternoon. Much belching of gas and vomiting of bile-stained fluid. Abdomen spastic. Temperature and pulse rose in evening and he died the following morning with symptoms of general peritonitis.

Autopsy: Condition of operative wound normal. Perforative gastric ulcer. General acute peritonitis.

60. Extirpation of Cerebellar Tubercle. 2320.

Male, 22 years. Symptoms of a cerebellar tumor. Suggestive evidence of pulmonary tuberculosis. Diagnosis: Cerebellar tubercle. Operation. January 11, 1915. Complete enucleation of a large cerebellar tubercle. Operation well borne by the patient. Uneventful convalescence. Healing complete. Return of symptoms after three weeks followed by rapid decline and death five weeks after operation.

Autopsy: Tuberculosis of lungs, chronic pleurisy, tuberculous adeni-

tis. Brain free from disease.

61. Extirpation of Cerebellar Tubercle. 2989.

Female, 7 years. Symptoms of cerebellar tumor. Tuberculin reaction positive. Operation. June 4, 1915. A satisfactory enucleation of a large tubercular mass from right lobe of the cerebellum. Healing per primam. Uneventful convalescence with improvement for about a month. Subsequent rapid decline with high intermittent fever. Death six weeks after operation.

Autopsy: General miliary tuberculosis involving practically every organ in the body.

62. Partial Extirpation of Cerebello-Pontine Tumor (Right). 3497.

Female, 47 years. Symptoms of cerebello-pontine tumor for three years. General condition good. Operation. Sept. 10, 1915. Suboccipital exploration. Exposure of tumor. Capsule split and most of tumor extirpated. Patient bore operation fairly well. Postoperative disturbance in deglutition with inhalation and death six days after operation.

Autopsy: Fragment of cerebello-pontine tumor. Bronchopneumonia (double). Acute fibrinous pleuritis.

63. Suboccipital Exploration for Cerebello Pontine Tumor. 2453.

Male, 22 years. A previous suboccipital decompression in November, 1914, followed by amelioration of general pressure symptoms for three months. Return of symptoms with difficulty of deglutition and respiration. Operation. February 12, 1915. A deep-seated tumor was located, but could not be removed. Closure without incident. Moderate bleeding. Continuous rise of pulse during operation. Fair condition during remainder of day. Sudden respiratory failure twelve hours after operation.

Autopsy: Large dural endothelioma (cerebello-pontine).

64. Suboccipital Exploration for Cerebellar Tumor (Certified). 3363.

Male. 31 years. Subtemporal decompression in June, 1915, with considerable relief for two months. Reëntered hospital with recurrence of pressure symptoms. Difficulty of swallowing. Retention of urine. Ventricular puncture disclosed fluid under considerable tension. Presumed subtentorial tumor. Operation. August 11, 1915. A suboccipital exploration excellently borne. Tumor not disclosed. Healing per primam. No marked change in condition for four weeks, when he died rather suddenly with signs of respiratory failure.

Autopsy: None permitted.

## REPORT OF THE SURGEON-IN-CHIEF

65. (1) Opening and Draining Pelvic Abscess, (2) Double Salpingooophorectomy, for Acute Exacerbation of Chronic Pyosalpinx. 3885.

Female, 36 years. History of acute salpingitis of some six months' duration. Recent exacerbation of four to five weeks. Syphilis. A fat, flabby, sick woman. Treatment for two weeks with hot douches, etc. Operation. Ether. Vaginal drainage of pyosalpinx. Temporary improvement followed by exacerbation of fever and abdominal pain. Operation. (Nine days after first operation.) Ether. Double salpingo-oophorectomy. Long, difficult operation. Drainage by vagina and abdomen. Immediate improvement followed in a few days by evidence of pyelonephritis. Good drainage and satisfactory abdominal condition. Increasing pyuria. Death, nineteen days after second operation from pyelonephritis.

Autopsy: None permitted.

66. Double Salpingectomy and Left Oophorectomy. Chronic Salpingo-Oophoritis. 2737.

Female, 28 years. No children. History of pelvic inflammation for one year. Pain, chills, and profuse sweating for last four days. A healthy-looking woman. Uterus fixed in retroversion. Temperature ranges 99 to 102. White count 18,000. Under observation for five days, during which temperature fell to normal. Operation. Ether (drop method). Pelvic examination followed by laparotomy. Removal of very adherent tubes and left ovary. Right ovary saved. No pus encountered, but pelvis drained with cigarette wick. Excellent convalescence (normal temperature, pulse, etc.) until on the seventh day she suddenly became cyanotic with difficult respiration and convulsive movements. Partial recovery followed immediately by second fatal attack. Death twenty minutes after beginning of first attack.

Medical Examiner reported "Pulmonary thrombosis."

67. Exploratory Laparotomy. Carcinoma of Ovary. 3852.

Female, 20 years, who considered herself to be about three months pregnant. Two weeks before entrance she had begun to have knifelike attacks of pain in lower abdomen, which rapidly enlarged. No pain for four days before entrance. Patient looks very sick. Temperature normal, pulse 130. White count 7,000. Uterus feels much larger than that of a three months' pregnancy. Question of free fluid in abdomen. Diagnosis uncertain. Operation. Ether (Connell method). Exploration shows abdomen to be full of bloody fluid. Bluish nodular tumor of right ovary considered inoperable. (Section shows large round cell sarcoma.) Miscarriage six days after operation. Death on seventh day.

Autopsy: None permitted.

68. Hysterectomy for Carcinoma of Uterus (Body). 2563.

Female, 55 years, suffering from uterine hæmorrhage of a year's duration; healthy-looking, rather stout. Preliminary curettage under ether showed large uterus with extensive adenocarcinoma of the body. After six days — Operation. Ether (Connell method). Generally smooth anæsthesia. Duration of operation two hours accompanied by steady

rise of pulse. Removal of uterus, tubes, and ovaries (not a wide dissection, however) and tissues about cervix divided with the cautery. Closure of vagina without drainage. Moderate loss of blood from rupture, after ligation, of a very friable right uterine artery. On the following day the patient's pulse was normal in rate, but a little irregular, and she seemed somewhat shocked. On second day after operation lobar pneumonia with friction rub on right. Death on sixth day.

Autopsy: Normal abdomen. Lobar pneumonia on right with purulent effusion. Early pneumonia on left. Heart not remarkable.

69. Amputation of Cervix (Cautery for Diagnosis). Hysterectomy FOR CARCINOMA OF CERVIX. 2881.

Female, 32 years. For two months, moderately profuse hæmorrhage from uterus. Loss of twenty pounds in a year. A sallow, anæmic-looking, apathetic woman. Hæmoglobin 80%. Suspicious laceration of cervix of ancient date with bleeding. Operation. Ether (Connell method). Examination inconclusive. Cervix amputated with cautery. Violent hæmorrhage two hours later. Cervix sewed together, stopping hæmorrhage. Steady recovery for sixteen days, at the end of which time hæmoglobin was 80% and red count 4,280,000. Pathologic report: Early carcinoma. Operation. Ether (Connell method). Good anæsthesia. Operation lasted two hours. Complete hysterectomy with transplantation of an ovary. Bloodless and satisfactory. Respirations rose to forty-five on night of operation but came to normal on the following day. Thereafter satisfactory recovery until development of pneumonia on the third day after operation. Death on fourth day after operation. Autopsy: None permitted.

70. Suprapubic Cystotomy for Hypertrophy of Prostate. 2830.

Male, 76 years. Dysuria eight years. Difficult urination of eight years. Partial retention. Imcomplete emptying of bladder. Catheter life. A well-nourished, dull, drowsy man. Prostate very large. 900 c.c. of very foul urine obtained by catheter. Deterioration in hospital. Patient appears uræmic. Operation. Novocaine. Suprapubic drainage established. Death four days later - uræmia.

Autopsy: None permitted.

71. Drainage of Extravasation of Urine (Stricture of Urethra).

Male, 58 years, who was operated on seventeen years ago at another institution for stricture of urethra. Frequent attacks of retention since then necessitating dilatation of urethra. Perineal fistula for three years. through which most of urine has been passed. Extravasation of urine took place four days (or more) before entrance. On entrance an extensive abscess in abdominal wall upward and to the right from pubes. Patient dull and appears uræmic. High temperature. Operation. Novocaine. All attempts to enter bladder by urethra or through perineal fistula futile. Drainage of extensive extravasation of urine. Bladder not opened. Abundant drainage of urine and pus from abdominal incision. Death in four days.

Autopsy: Demonstrated stricture, extravasation of urine, acute diphtheritic cystitis, ureteritis, and advanced pyelo-nephritis.

# Report of the Physician-in-Chief

## HOSPITAL STATISTICS

In the first annual report of the medical service of the Peter Bent Brigham Hospital the annual reports published by leading American general hospitals were discussed and it was pointed out that the tendency in the reports of the work of these institutions was to give a full administrative and financial report and to shorten the report of medical work to a much briefer statement. Several reasons for this condition were suggested, but it was not thought that the meager medical reports so often found had resulted from any lack of interest on the part of the public in the professional work of hospitals. The great difficulty in presenting the medical work in statistical tables that adequately furnish the information desired by those who use the reports probably is an important element in bringing about the existing condition of apparent neglect of the opportunity to present to the public a comprehensive statement of hospital professional work. In our first report we used a form of statistical table which was in use by several prominent hospitals and in discussing this pointed out how a very considerable error could and did occur in many of the figures and suggested this as a cause of dissatisfaction with medical statistical tables.

As a result of a canvass among medical men it seemed that the information most often wished by them from statistical tables was a knowledge of the relative frequency of occurrence of various diseased conditions and of the causes of death. Furthermore it was apparent that if statistics from different hospitals or from the same hospital in different years were in the same form the advantage of obtaining information from larger groups of cases would be an obvious one. To accomplish this latter the International Nomenclature for causes of death has been used by many. Unfortunately this list includes so few subdivisions that in an unmodified form it cannot be used as a list of diagnoses in any institution in which refinement of diagnosis is carried to any degree or in which new conditions or symptom complexes are recognized. To meet this difficulty various hospitals have modified the International Nomenclature by adding needed subdivisions. Doing this it is evident that soon a great variety of terms will creep in as names for the same conditions unless institutions group themselves together and adhere to a common terminology. So far we at the Brigham have utilized the nomenclature devised at Bellevue Hospital, but this has proven inadequate, and so in the future (beginning in the next annual report) we will use a nomenclature based on the International Nomenclature as modified by Bellevue Hospital, but amplified for our needs through a committee representing the Boston hospitals, which hospitals have agreed to use the same terminology in their diagnoses. This will result in a nomenclature common to the Boston hospitals and easily translatable into the International Nomenclature for those who wish to obtain figures comparable with those from other institutions which use diagnoses based on the International Nomenclature.

As pointed out in our last report the two most common sources of error in statistical tables in so far as they represent the relative frequency of diseased conditions arise from the attempt to represent a case in the table by a single diagnosis and from the failure to exclude readmissions, which would lead to an apparently large number of cases with a given condition if the same case with the same condition was admitted several times during the

#### REPORT OF THE PHYSICIAN-IN-CHIEF

year. To meet this first objection the Massachusetts General Hospital, as have many other hospitals, changed their form of statistical table from a case table to a diagnosis table which required the omission of results of treatment in cases, but they failed to eliminate the second error by including readmissions among their totals and by duplicating where transfers to other services occurred, so that their totals do not indicate correctly the relative frequency of occurrence of those diagnoses in which readmissions or transfers occur with any frequency.

The statistical Table A (see p. 117) which we present this year is a table of diagnoses and does not include any but the first admission of a case except when added diagnoses were made on subsequent admissions. Consequently our figures represent the actual relative frequency of the diseased conditions as they appeared on the medical service, and larger statistics can be obtained by adding the figures for this year to those which appear in succeeding years, so long as the present system is followed, because there will be no repetitions by reason of readmissions. However, the table represents only the conditions met with on the medical service; a correct total for the entire hospital cannot be obtained by adding the figures for a given diagnosis found in the medical and surgical tables, because a patient transferred from one service to the other appears in the table of each service as one diagnosis, which will lead to totals being too large if the figures for these services are added in conditions where transfer frequently takes place.

The statistical Table B (see p. 122) gives the total number of patients and the number of deaths in each group arranged under the headings of the international classification of causes of death.

## DIAGNOSES

Inasmuch as accuracy in diagnosis is the determining factor in the value of any form of statistics representing the professional work of a hospital, the method followed in arriving at and recording diagnoses becomes of great interest to those who use statistical tables. Who makes the diagnoses? In many hospitals the house officer makes most of them, and though he has had but little experience in medical work there is very scant supervision of his diagnoses. Errors necessarily are frequent under such conditions. In other hospitals the diagnoses are supposed to emanate from the visiting physician, but transmission is verbal and the history of the patient does not indicate who was responsible for the diagnosis at the head of the history. In such a system many slips are possible, and probably often do happen. In other hospitals a recorder or registrar examines all histories and detects and corrects errors that may occur. When conscientiously carried out this system works well. A variety of other methods are in vogue.

After studying the methods followed in a number of institutions, I have adopted the following system for the medical service of the Peter Bent Brigham Hospital which attempts to combine a number of the good features seen elsewhere and to adapt them to our own conditions of service and record room organization. Every member of the staff from the junior house officer to the physician-inchief is encouraged to record frequently and separately in the history both an objective description of his observations on the patient and his interpretation of these in the form of an impression, a diagnosis or a discussion of possible diagnoses, and every addition to the history sheets of the patient bears the name of the observer responsible for the addition. These records are not changed if subsequent study leads the observer to different conclusions,

but additional notes are made in which the observer is free to record the reasons for his change of view.

The recording of conclusions serves the double purpose of stimulating thinking over the objectively described observations and bringing home to the observer his mistake when subsequent developments show him to have been wrong; it is only too easy to convince oneself that such and such had been his opinion in looking back over objective descriptions at a time when memory has grown faint, but when the opinion is there in written form no mental hedging is possible. Moreover to see your colleague's opinion stimulates question and healthy skepticism which if nurtured usually leads to more thorough study of the case with a resultant increased knowledge of the patient's condition.

In the ordinary routine after the house officer has obtained and recorded his history of the patient and his notes on the physical examination, the patient is seen the next day, or sooner when the patient is very sick, by an assistant resident or the resident physician, or both, and also by someone or several of the visiting staff; each in turn records an objective description of his observations and his opinion of the case. In this way most patients have had recorded before their discharge a number of opinions as to the diagnosis; moreover all opinions are signed ones, so that when there are discordant views it is down in black and white what each individual thought. Before the patient is discharged the senior house officer obtains from a visiting physician the diagnosis that is to be entered for the case and this diagnosis is written in pencil on the history. At the end of the week, the histories of patients discharged during the week are assembled and gone over by the house officers for corrections. They then go to an assistant resident, who likewise reads and corrects them. They are then passed to a visiting physician who looks them over again. Finally they come

to the physician-in-chief, who looks them over and at this time places his initials after the diagnoses to indicate his responsibility for the acceptance of these diagnoses as being correct in so far as he can judge of their accuracy. Often he adds an explanatory note giving the reasons for any conclusions which may seem not in accord with observations made on the patients. In the absence of the physician-in-chief one of the physicians does this work and initials the diagnoses. Now these histories go to the record room and are gone over by a clerk for omissions and the diagnoses are checked up to see if they agree with the list of diagnoses given in the nomenclature in use. If the diagnosis used does not appear in the list of accepted diagnoses the history is sent to the physician-inchief to see if the change was intentional; if intentional the diagnosis can be entered as a diagnosis to be regarded as acceptable in the future if approved by the committee representing the coöperating hospitals. Finally, before going to the binder, the histories are once more checked over by a clerk in the record room and by a member of the visiting staff.

This may seem a useless amount of detail, but its value is shown in the fact that a large number of errors are eliminated by those that go over the histories until for those who make the final readings comparatively few remain to be discovered. Then to do this examining of histories does not entail as much work as might seem to be the case at first glance, and for the various members of the staff it has a distinctly educational value inasmuch as it serves to improve the history-taking ability of the house officers and impresses upon all the staff details of the cases which will prove helpful in later years as a basis of their clinical judgment and experience.

## Typewritten Histories

All of our histories, physical examinations, daily notes, etc., that go to make up the patients' records are typewritten from notes or from dictation to dictaphones or stenographers. This in itself has increased strikingly the efficiency of our work. It encourages complete histories and full and frequent notes on the patients' condition. It saves much time to the visiting staff, formerly spent in the effort to decipher various forms of penmanship. It means that physicians trained to do medical work do not spend long hours in transcribing records. With the manifest advantages it seems surprising that so many hospitals cling to the old system of handwritten records when that system has disappeared long since from the business world where approved methods of economic efficiency prevail. The time saved to all members of the hospital staff by having typewritten records means more time for a better study of our patients, and the more complete record of each patient makes for better diagnoses and better treatment. Every hospital staff might do well to calculate what its patients lose by not having dictated typewritten records.

## MEDICAL WARD SERVICE

From January 1, 1915, to December 31, 1915, inclusive, there were 1774 admissions to the medical wards. Of these cases a considerable number were readmissions. There were discharged from the medical service during the year 1915, 1755 patients, and there remained in the wards on January 1, 1916, admitted during the year 1915, 78 patients. Of the 1755 discharged patients a number were readmitted to the wards several times for various special forms of treatment, particularly intravascular treatment with salvarsan and intraspinous treatment with salvarsanized serum. The number of such readmis-

sions was 622, so that the medical service actually dealt with 1133 individuals during the year 1915.

The condition of the 1755 patients who were discharged from the service during the year was as follows: Well, 215; improved, 1074; unimproved, 186; untreated, 60; transferred to the surgical service, 99; dead, 121. The number of untreated cases is composed in part of patients who were sent into the hospital for diagnosis and were sent back to their physician for treatment based on this diagnosis and in part of patients who for one reason or another were unable to remain in the hospital to carry out treatment advised.

In the table which follows, Table A, will be found the number of the chief medical conditions encountered during the year arranged in alphabetical order. It is to be carefully kept in mind in using this table that it is not a table of patients but a table of medical conditions or diagnoses. For example, if a patient has aortic insufficiency and also chronic nephritis these two diagnoses would appear as making up the total number under each heading. Readmissions are not included in the table, that is, if a case of syphilis comes in five times during the year, in this table that case only appears once.

# Table A

# Table of Medical Conditions

# January 1, 1915, to January 1, 1916

Abscess, Alveolar	7	Atony of Stomach	2
Abscess of Kidney	2	Atrophy of Liver, Acute Yellow.	1
Abscess of Lung	2	Balanitis	1
Abscess of Maxilla	1	Bronchiectasis	5
Abscess, Perinephric	1	Bronchitis, Acute	32
Abscess, Tonsillar	2	Bronchitis, Chronic	
Acromegaly	1	Bronchitis, Subacute	3
Addison's Disease	4	Bulbar Paralysis	1
Adhesions about Intestine	4	Bursitis	1
Adhesions about Gall Bladder	2	Calculus in Ureter	3
Albuminuria, not definitely ne-		Carcinoma of Bladder	1
phritis	7	Carcinoma of Intestine	3
Alcoholism, Chronic	5	Carcinoma of Liver	2
Amyloid Disease	1	Carcinoma of Lymph Nodes,	
Anæmia, Chlorotic	1	Mesenteric	1
Anæmia, Pernicious	21	Carcinoma of Maxillary Sinus	1
Anæmia, Secondary	8	Carcinoma of Œsophagus	2
Anæmia, Splenic	1	Carcinoma of Ovary	1
Aneurysm of Aorta	7	Carcinoma of Pancreas	4
Aneurysm of Innominate Artery.	1	Carcinoma of Peritoneum	2
Angina Pectoris	5	Carcinoma of Prostate	1
Aorta, Dilatation of (Non-syph-		Carcinoma of Stomach	26
ilitic)	10	Carcinoma of Uterus	1
Aortitis, Syphilitic	18	Cardiospasm	4
Aphasia	2	Cellulitis	3
Appendicitis	1	Chancroid	1
Arrythmia, Cardiac (see Table D)		Chlorosis (see Anæmia)	
Arterial Sclerosis, General	48	Cholangitis	1
Arteriosclerosis, Cerebral	3	Cholecystitis	12
Arthritis, Acute (not including		Cholelithiasis	12
acute articular rheumatism)	5	Chorea	14
Arthritis, Chronic	25	Choroiditis	1
Arthropathy of Tabes Dorsalis	3	Cirrhosis of Liver	12
Ascaris Lumbricoides	1	Colitis, Chronic Ulcerative	1
Asthma, Bronchial	15	Colitis, Chronic Mucous	4

Congenital Malformation of		German Measles	1
Face-Cleft Palate	1	Goitre, Simple	4
Congenital Malformation of		Gonococcus Infection of Bladder	1
Heart-Pulmonic Stenosis?	1	Gonococcus Infection of Endocar-	
Constipation	12	dium	1
Curvature of Spine	2	Gonococcus Infection of Epididy-	
Cyst of Ovary	1	mis	1
Cystitis, Simple	6	Gonococcus Infection of Eyes	1
Cystitis, Tuberculous	4	Gonococcus Infection of Joints	2
Debility	8	Gonococcus Infection of Kidney	1
Degeneration Lenticular Nucleus		Gonococcus Infection of Perito-	
and Thalamus	1	neum	2
Dermatitis Medicamentosa	2	Gonococcus Infection of Testicle	1
Detached Retina	1	Gonococcus Infection of Urethra	8
Diabetes Insipidus	1	Gonococcus Infection of Vagina	2
Diabetes Mellitus	61	Gout	4
Diarrhœa	4	Headache, Cause Unknown	4
Dysentery	1	Hematemesis, Cause Unknown	1
Dystrophy, Progressive Muscular	1	Hematogenous Infection of Kid-	
Eczema	1	ney	1
Elephantiasis, Non Filarial	1	Hematuria, Cause Unknown	3
Embolism, Pulmonary	1	Hemiplegia	8
Emphysema, Pulmonary	5	Hemophilia	2
Empyema of Gall Bladder	1	Hemoptysis	3
Endocarditis, Acute	6	Hæmorrhage into Cerebrum	8
Endocarditis, Chronic (seë Val-		Herpes Zoster	1
vular Disease, Chronic Car-		Hydronephrosis	2
diac)		Hydropneumothorax	1
Enlargement of Prostate	6	Hydrothorax	7
Enteritis, Acute	5	Hyperchlorhydria	3
Eosinophilia of Unknown Cause.	2	Hypernephroma of Kidney	1
Epilepsy	4	Hypertension without Nephritis.	5
Erysipelas	1	Hyperthyroidism	15
Erysipeloid	1	Hypertrophy of Tonsils and Ade-	
Erythema Induratum	1	noids	1
Erythema Multiforme	1	Hypochlorhydria	7
Exophthalmic Goitre (see Hy-	~	Hysteria	8
perthyroidism)		Infarct of Kidney	2
Fever of Unknown Cause	13	Infarct of Lung	2
Fibromyoma, Uterine	2	Infarct of Myocardium	1
Filariasis	1	Infection (Aerogenes Bacillus)	1
Fissure of Anus	1	Influenza	1
Furunculosis	1	Intestinal Obstruction	5
Gangrene, Diabetic	2	Jaundice, Catarrhal	7
Gastritis	3	Labyrinthitis, Chronic	1
General Paralysis of the Insane	13	Laryngitis, Acute	2
Guidia Laraiyolo of the Insalic			-

## REPORT OF THE PHYSICIAN-IN-CHIEF

Lead Poisoning	6	No Disease	33
Leukemia, Lymphatic	1	Obesity	1
Leukemia, Myelogenous	2	Obstruction of Common Bile	
Lipoma of Perineum	1	Duct	1
Lowered Sugar Tolerance	1	Obstruction (benign) of Pylorus.	1
Lymphadenitis, Acute	3	Oedema from Salt Retention	1
Lymphadenitis, Chronic	2	Opium Poisoning, Acute	1
Lymphoma of Stomach	1	Osteoarthropathy, Hypertrophic	1
Lymphosarcoma of Lymph Nodes	1	Otitis Media, Acute	2
Lymphosarcoma of Mediastinum	1	Papilloma of Bladder	1
Malaria	2	Paralysis of Arm	1
Menier's Disease	1	Paralysis of Laryngeal Nerve	1
Meningitis, Acute Epidemic		Paralysis of 3d and 6th Nerves	1
Cerebro-spinal	4	Paralysis Agitans	2
Meningitis, Acute Staphylococcus	1	Pericarditis, Acute with Effusion	1
Meningo-encephalitis Hæmor-	_	Pericarditis, Fibrinous	2
rhagic	1	Pericarditis, Chronic Adhesive	5
Menopause	1	Pericarditis, Unclassified	1
Mercury Poisoning, Acute	1	Pericholecystitis, Chronic	1
Migrane, Ophthalmoplegic	1	Periostitis, Acute	1
Miscarriage	1	Peritonitis, Chronic, Local	1
Morphine Poisoning, Chronic	3	Peritonitis, Subacute	1
Mumps	1	Pes Planus (Pronated Feet)	1
Myocarditis, Chronic	91	Pharyngitis, Acute	5
Myositis, Acute	2	Phosphaturia	1
	1		10
Myotonia Acquisita	2	Pleurisy, Acute Fibrinous	
Neoplasm of Medications		Pleurisy, Acute Serofibrinous	22
Neoplasm of Mediastinum	4	Pleurisy, Chronic Fibrous	6
Neoplasm of Perirenal Tissue	1	Pleurisy, Chronic Interlobar	2
Nephritis, Acute	8	Pleurisy, Suppurative	4
Nephritis, Chronic without Hy-		Pneumonia, Broncho	17
pertension	56	Pneumonia, Lobar	46
Nephritis, Chronic with Hyper-		Pneumothorax	1
tension		Polycythæmia, Chronic	1
Nephritis, Subacute	1	Polyglandular Syndrome	3
Nephrolithiasis	5	Polyserositis, Acute	1
Nervous Dyspepsia	1	Pott's Disease	1
Neuralgia, Trigeminal	1	Pregnancy	5
Neurasthenia		Prostatic Calculi	1
Neuritis, Alcoholic	6	Psoriasis	1
Neuritis, Peripheral General	1	Psychoneurosis	1.
Neuritis, Post Herpetic		Psychosis, Acute Depression	1
Neurosis, Gastric		Psychosis, Dementia Præcox	3
Neurosis, Intestinal		Psychosis, Epileptic	2
Neurosis, Traumatic		Psychosis, Exhaustive	1
Nicotine Poisoning, Chronic	1	Psychosis, Manic Depressive	1

Psychosis, Post Infectious Psychosis, Post Typhoidal Psychosis, Pre-senile Psychosis, Uremic	1 1 1	Tænia Saginata  Tetanus  Thrombosis of Artery  Thrombosis of Vein	7 1 4 2
Psychosis, Unclassified Pulsating Veins of Leg Purpura	1 1 3	Tic, Convulsive  Tonsillitis, Acute Follicular  Tonsillitis, Chronic	1 33 9
Pyelitis, Acute	1	Traumatism to Shoulder (Fall)	1
Pyelitis, Tuberculous	1	Tuberculosis, Acute Pneumonic	2
Pyelitis, Unclassified	2	Tuberculosis of Bladder	1
Pyelonephritis	2	Tuberculosis of Fallopian Tubes.	1
Pyonephrosis	2	Tuberculosis of Intestines	1
Pyorrhœa Alveolaris	3	Tuberculosis of Joint (Shoulder).	1
Rat Bite Fever	1	Tuberculosis of Kidney	5
Raynaud's Disease	1	Tuberculosis of Larynx	1 4
Retinitis Rheumatism, Acute Articular	1 35	Tuberculosis of Lymph Nodes  Tuberculosis, Miliary	3
Rhinitis, Acute	3	Tuberculosis of Peritoneum	1
Rupture of Heart, Spontaneous.	2	Tuberculosis of Pleura	7
Rupture of Esophageal Varix	1	Tuberculosis, Pulmonary	36
Salpingitis, Chronic	2	Tuberculosis of Suprarenal	
Sarcoma of Ilium	1	Gland	2
Scarlet Fever	2	Tumor of Ovary	1
Sclerosis, Amyotrophic Lateral	1	Tumor of Thyroid	1
Sclerosis, Lateral	3	Typhoid Fever	23
Sclerosis, Multiple	4	Typhus Fever	1
Scoliosis	1	Ulcer, Diabetic	1
Senility	1	Ulcer of Duodenum	2
Septicæmia	4	Ulcer of Stomach	12
Sinus of Periurethral Tissues	1	Ulcer, Tropical (Leishmaniasis)	3
Sinusitis, Frontal	3	Ulcer, Varicose	4
Splanchnoptosis	6	Ureteral Colic	2
Sprue	1	Urticaria, Giant	1
Stenosis of Bronchi	1	VALVULAR DISEASE, CHRON	IC
Stomatitis, Hæmorrhagic	1	CARDIAC	
Stomatitis, Mercurial	1		7
Synovitis, Ankle	1	Aortic Insufficiency	7
Synovitis, Knee	2	with Mitral Insufficiency	•
Synovitis, Shoulder	1	with Mitral Insufficiency and	6
Synovitis, Wrist	1	Stenosis with Mitral Insufficiency and	U
Syphilis, Primary, Secondary,	120	Stenosis and Tricuspid In-	
etc Symbilia of Control Maryous Sys-	139	sufficiency	2
Syphilis of Central Nervous Sys-	21	with Mitral Stenosis	1
tem	2	Aortic Insufficiency and Ste-	•
Syringomyelia	41	nosis	3
Tabes Dorsalis	11	110010	

## REPORT OF THE PHYSICIAN-IN-CHIEF

1	with Mitral Stenosis and	
_		1
1		28
5	nosis	33
	with Tricuspid Insufficiency	
	and Stenosis	1
1	Mitral Stenosis	11
	Pulmonic Insufficiency and	
	Stenosis	1
1	Tricuspid Insufficiency	2
	Varicella	1
	Vomiting, Neurotic	2
1	Vomiting of Pregnancy	4
		Mitral Insufficiency and Ste-  nosis.  with Tricuspid Insufficiency and Stenosis.  Mitral Stenosis.  Pulmonic Insufficiency and Stenosis.  Tricuspid Insufficiency Varicella.  Vomiting, Neurotic.

Table B, which follows, is essentially a table of causes of death grouped according to the International classification. The chief diagnosis in each case represents the patient. Even if several diagnoses were made on the patient, the patient appears under but one, and that the one representing the most important cause of his illness. This being the case, the figures in Table B will not agree with those in Table A, which is a table of diagnoses. In order that the number of deaths should show the per cent mortality of a given condition readmissions are counted but once. Unless this is done the relative mortality would appear smaller than is actually the case. For example, there would seem to be 4 deaths among 355 patients discharged with the diagnosis of syphilis, but as 249 of these discharges were of patients readmitted for treatment there were actually in the hospital only 106 individuals with syphilis, of whom 4 died.

# Table B

# Report of Medical Diseases in Terms of International Classification

January 1, 1915, to January 1, 1916

Nos. of International Nomenclature	Diseases and Conditions	Total No. of discharges	Discharges of patients admitted more than once	Actual No. of patients completing their stay in the hospital	No. of deaths
	GENERAL DISEASES				
1	Typhoid fever	25	1	24	1
4	Malaria	2		2	
7	Scarlet fever	1		1	
10	Influenza	1		1	
14	Dysentery	1		1	
18	Erysipelas	1		1	
19	Other epidemic diseases	4		4	
20	Purulent infection and septicæmia	4	1	3	1
24	Tetanus	1		1	1
25	Mycoses	1		1	
28	Tuberculosis of lungs	24	2	22	1
29	Acute miliary tuberculosis	4		4	
34	Tuberculosis of other organs	7	1	6	1
37	Syphilis	355	249	106	4
38	Gonococcus infection	8		8	1
40A	Carcinoma of stomach and liver	22	1	21	2
41A	Carcinoma of peritoneum, intestines, rectum	3	1	2	
41F	Sarcoma of peritoneum, intestines, rectum	1		1	
42A	Carcinoma of female genital organs	1		1	
45A	Carcinoma of other organs, and of organs not				
	specified	9		9	
45B	Endothelioma of other organs, and of organs not				
	specified	1		1	

## REPORT OF THE PHYSICIAN-IN-CHIEF

Nos. of International Nomenclature	Diseases and Conditions	Total No. of discharges	Discharges of patients admitted more than once	Actual No. of patients completing their stay in the hospital	No. of deaths
45E	Hypernephroma of other organs, and of organs not specified			1	
45G	Mixed malignant tumors of other organs, and of organs not specified			1	
46	Other tumors (tumors of the female genital organs excepted)			3	
47	Acute articular rheumatism	1		31	
48	Chronic rheumatism and gout		1	2	
50	Diabetes		1	59	9
51	Exophthalmic goitre			7	
52	Addison's disease			4	2
54	Anæmia, including chlorosis	1		27	2
55	Other general diseases			7	2
56	Alcoholism (acute and chronic)	1	1	1	
57	Chronic lead poisoning	1	1	5	1
58	Other chronic occupational poisonings	2	•	2	• • •
59	Other chronic poisonings	1		1	
	DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF SPECIAL SENSE				
60	Encephalitis	1		1	1
61	Simple meningitis	1		4	3
62	Locomotor ataxia	1	1		1
63	Other diseases of the spinal cord				
66	Paralysis without specified cause	1	1	6	2
67	General paralysis of the insane	1		$\begin{array}{c c} 7 \\ 2 \end{array}$	•
68	Other forms of mental alienation			1	
69 72	Epilepsy	1	1	_	
73	Neuralgia and neuritis	1 .		7	
73 74	Other diseases of the nervous system	1		22	
75	Diseases of the eye and their annexa	1			
76	Diseases of the ears		3	3	
	DISEASES OF THE CIRCULATORY SYSTEM				
77	Pericarditis		1	1	
78	Acute endocarditis		2	2	2

Nos. of International Nomenclature	Diseases and Conditions	Total No. of discharges	Discharges of patients admitted more than once	Actual No. of patients completing their stay in the hospital	No. of deaths
79	Organic diseases of the heart	135	35	100	30
80	Angina Pectoris	1		1	
81	Diseases of the arteries, atheroma, aneurysm,			00	-
83	etc	33	11	22	6
0.4	phlebitis, etc.)			2	• •
84 85	Diseases of the lymphatic system			4	• •
03	Hæmorrhage, other diseases of the circulatory system	7	2	5	
	DISEASES OF THE RESPIRATORY SYSTEM				
86	Diseases of the nasal fossæ	ł	2	4	
87	Diseases of the larynx			1	
88	Diseases of the thyroid body			7	• •
89	Acute bronchitis	21		20	2
90 91	Chronic bronchitis	18 9		16 8	2
92	Pneumonia	41	_	41	16
93	Pleurisy		1	26	
96	Asthma	l .	2	11	
97	Pulmonary emphysema			1	
98	Other diseases of the respiratory system (tuberculosis excepted)	(	1	6	2
	DISEASES OF THE DIGESTIVE SYSTEM				
99A	Diseases of the teeth and gums			1	
99B	Diseases of the mouth and annexa	3		1	
100	Diseases of the pharynx	ļ	2	34	
- 102	Ulcer of the stomach		• •	10	
103	Other diseases of the stomach (carcinoma excepted)	1 _	2	23	
105	Diarrhœa and enteritis (over 2 years)	1	1	13	
107	Intestinal parasites			9	
108	Appendicitis			1	
109	Intestinal obstruction	1		3	
110B 111	Other diseases of the intestines	4		15	1
111	Acute yellow atrophy of liver	1		1	

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Nos. of International Nomenclature	Diseases and Conditions	Total No. of discharges	Discharges of patients admitted more than once	Actual No. of patients completing their stay in the hospital	No. of deaths
113	Cirrhosis of liver	13	2	11	3
114	Biliary calculi	10		9	• •
115	Other diseases of liver	15		15	• •
117	Simple peritonitis (non-puerperal)	1		1	
119	Acute nephritis	5		5	2
120 122	Bright's disease	122 18		99	21
123	Other diseases of the kidneys and annexa Calculi of the urinary passages	9	5 1	13 8	• •
123	Diseases of the bladder	6	_	6	• •
126	Diseases of the prostate			1	
130	Other diseases of the uterus	2		2	
132	Salpingitis and other diseases of the female				
	genital organs	2		2	• •
134A	Normal labor	1		1	• •
	DISEASES OF THE SKIN AND OF THE CELLULAR TISSUE				
142	Gangrene	1		1	• •
144	Acute abscess	1		1	• •
145C	Other diseases of the skin and annexa	6	1	5	• •
	DISEASES OF THE BONES AND OF THE ORGANS OF LOCOMOTION				
146	Diseases of the bones (tuberculosis excepted) .	1		1	• •
147	Diseases of the joints (tuberculosis and rheu-				
1.10	matism excepted)	26	4	22	• •
149	Other diseases of the organs of locomotion MALFORMATIONS	2	• •	2	• •
150	Congenital malformations	3	2	1	
	"OLD AGE"				
154	Senility	1		1	• •
	AFFECTIONS PRODUCED BY EXTERNAL CAUSES				
165	Other acute poisonings	1		1	1
	ILL-DEFINED DISEASES				•
189	Unclassified or ill defined	52		52	

# Table C Summary of Medical Report

January 1, 1915, to January 1, 1916

		*	
Total number of medical admissions in 1915  Total number of medical cases remaining in the wards		1774	
January 1, 1915	1	59	
			1833
Total number of medical readmissions discharged in 1915 Total number of medical new cases discharged in 1915.	622 1133	1755	
Total number of medical cases remaining in the wards		<b>&gt;</b>	
January 1, 1916		78	
			1022
			1833
Results on medical cases discharged in 1915 were as follows:			
Total number discharged well	215		
improved	-		
unimproved	184		
untreated	60		
transferred to Surgical Ser-			
vice	101		
dead	121	1755	
Total number of medical cases remaining in the wards		1755	
January 1, 1916		78	
			1833
			1000
*	7		

In looking over these statistical tables certain features are of interest. The great importance of syphilis as a factor in causing incapacity of individuals is strikingly shown. Among our medical conditions 240 diagnoses were of syphilis or of conditions recognized as of syphilitic origin. So important a part does syphilis play in the diagnosis and treatment of medical conditions that as a routine procedure a Wassermann test is made upon each patient admitted to the medical wards. In 1700 medical cases so tested 12 per cent showed a positive test and very often this knowledge of syphilitic infection greatly aided us in diagnosis and treatment. In many of these cases without the Wassermann test we would not have suspected syphilis, for the history and physical examination often fail to give any suggestion of a syphilitic infection, though one is present as shown by the laboratory tests. We feel that a routine Wassermann test should be included as a necessary procedure in the study of every medical case.

Disease of the cardio-vascular system makes up a large percentage of medical diseases. During the year diagnoses of organic cardio-vascular disease were made 352 times. Closely related to cardio-vascular disturbances are the 156 cases of chronic nephritis studied during the year. Very often syphilis is an important factor in causing cardio-vascular disease, as shown by our finding that among 600 patients with a positive Wassermann reaction, who were in our wards or Out-Door Department since opening the hospital, 9.3 per cent showed vascular involvement. Apart from aortic insufficiency associated with syphilitic aortitis or aneurysm, only two patients with chronic cardiac valvular disease have given positive Wassermann reactions while no case of uncomplicated chronic myocarditis showed a positive Wassermann reaction, so that in our series it is the vascular lesion and its secondary changes rather than the primary cardiac lesion that goes to make up this large percentage of cardio-vascular dis-

turbance of syphilitic origin. Likewise in chronic nephritis with hypertension syphilis does not play any important causative part, for in 120 such cases we had only 7 with positive Wassermann reactions, a percentage distinctly less than that obtained (12 per cent) for our total number of medical cases of all kinds.

The large number of diabetic patients coming to our wards (61 new cases during the year) very probably were attracted by the reports made of such excellent results now being obtained by the Allen method of treating this disease. This is purely a dietary treatment. In our experience it renders the diabetic quickly sugar free and enables us to increase his carbohydrate tolerance on the principle of not overstraining his ability to handle carbohydrates in his diet, so that he can go out of the hospital capable of returning to much of his normal activity and remain sugar free on a diet not difficult of continuing at home. In no case of diabetes coming for treatment did we fail to get the patient sugar free, and in almost all this was comparatively easy. Some patients were admitted in diabetic coma, and all of these died shortly after coming to the hospital. These, with one or two exceptions, were patients who had not had any very serious attempt made outside of the hospital to render them sugar free and to keep them so on dietary limitations within the requirements of the case. The management of these diabetic patients at home is referred to later on under the discussion of our Out-Door Department.

The three frequent acute infectious diseases that come to our wards are typhoid, pneumonia, and rheumatic fever. Of these rheumatic fever is rarely fatal (we have had 66 cases since our wards opened and no deaths), and yet it is a large factor in causing chronic cardiac disease that will cripple and eventually cut short the life of many people. Typhoid on the other hand is less prone to leave serious sequelæ, and now with the high caloric feeding of typhoid

## REPORT OF THE PHYSICIAN-IN-CHIEF

patients their progress is much more satisfactory. During the current year we had 24 cases of typhoid with 1 death, and in the period before this year 37 cases with 3 deaths, a mortality of 5.2 per cent since the hospital opened. Contrast with these what happens in pneumonia: 41 cases with 16 deaths this year and 62 cases with 16 deaths in the earlier period, a mortality of 31 per cent since the hospital opened. The much higher mortality in some periods than others we have found to run parallel with an increasing percentage of cases infected with pneumococci of high virulence, as determined by grouping the cases in accordance with the serum agglutination reactions as described by the workers at the Rockefeller Hospital in New York.

Soon after the hospital opened we installed a string galvanometer or electro-cardiograph for the study of our cardiac cases, and for some time we have been studying the majority of the patients admitted to the medical wards with this apparatus. As these cases have been taken in a routine way without any particular reference to the existence of cardiac disturbance the results as shown below in Table D are of interest as indicating the relative frequency of various forms of cardiac arrythmia.

# Table D

# Electro-Cardiographic Studies

Abnormal form of curve, normal rhythm	3
Auricular disturbance of undetermined nature	5
Auricular Fibrillation	132
Auricular Fibrillation (Paroxysmal)	8
Auricular Flutter	13
Bradycardia	13
Coupled Beats	32
Defective Conduction of the Right Branch of the Bundle of His	18
Defective Conduction of the Left Branch of the Bundle of His	1
Defective Conduction of Both Branches of the Bundle of His	1
Delayed Conduction Time	36
Digitalis Poisoning Complex	6
Displacement of the Heart	1
Heart Block (Complete)	6
Heart Block (Partial)	16
Auricular Hypertrophy	65
Left Ventricular Hypertrophy	237
Right Ventricular Hypertrophy	64
Interpolated Ventricular Beats	4
Nodal Rhythm	2
Normal Curve and Normal Rhythm	306
Premature Auricular Beats	40
Premature Auricular Beats (Blocked)	4
Premature Nodal Beat	14
Premature Ventricular Beats	101
Sino-Auricular Block	7
Sinus Arrythmia	41
Tachycardia Simple	6
Tachycardia Ventricular	1
Tachycardia (Paroxysmal Auricular)	6

# Medical Out-Door Department

The plan of having a service for ambulatory patients throughout the day, which has been in use since the hospital opened as described in the last annual report, has been continued with apparent success. The opportunity for the patient to come at the hour most convenient to himself seems to be appreciated. For many people this obviously makes possible more visits to the Out-Door Department. As pointed out by Dr. Howard in his report of last year, proportionately more rapid increase has taken place in those coming in the morning than in the afternoon hours. Statistics for several years will be required before we can say whether more patients can come conveniently at one hour than at another. Boston is a community in which out-door departments are opened generally in morning hours only. Possibly our patients still have the morning habit and are slow to learn that they can come in the afternoon if they so prefer. Probably our early rapid increase in patients in the afternoon resulted from the fact that we had no competition in the afternoon hours with other clinics and got those patients who could come in the afternoon and could not get away from their homes in the morning. A certain increment in the numbers from ten to twelve comes in patients asked to return during these hours to be seen by the Physicianin-Chief or the Physician in consultation with the regular medical man in charge of the Out-Door Department Clinic. Our figures however show that there is a considerable number of patients who do prefer other than morning hours. Our plan of having the house officer in charge of the out-door work after he has completed his ward service combined with the system of having a resident staff

of hospital graduates, renders it very easy to accommodate these patients whose daily life makes difficult a hospital visit at any hour in the day fixed by hospital rules. To us too it seems reasonable to assign to the difficult work of diagnosis and treatment of the ambulatory patient, not the house officer just out of the medical school, but one who has been trained and disciplined in our wards in preparation for this out-patient work, our best, not our poorest house officer from the point of view of training.

## CLASS SYSTEM OF HANDLING AMBULATORY PATIENTS

In developing our medical work in the Out-door Department we have felt that an application of the class system of managing groups of patients such as has proven so valuable in tuberculosis was applicable to a number of chronic diseases, and a beginning was made last year by organizing a group of diabetics for instruction in regard to their diet. During the present year the diabetic class has been well organized and since March 1, 1915, has been holding regular meetings, at first under the guidance of Dr. C. K. Drinker and Mrs. Mark, since July 1 under Dr. R. P. Dawson, Associate in Medicine, and Mrs. Mark. A part of the report of Dr. Dawson and Mrs. Mark for the six months beginning July 1 shows very well what has been accomplished.

## THE DIABETIC CLASS

The Diabetic Class has been continued along the lines laid out at its beginning, March 1, 1915. It comprises the diabetic patients who have come to the Out-Door Department, except those who because of unintelligence or complication of diseases would be unsatisfactory material. The class meets in the amphitheater at two P.M. on Wednesdays, with a physician and a volunteer worker

in charge, the patients being sent in to them on their arrival at the desk. Each patient is considered individually. The class is informal and lasts an hour, or an hour and a half.

Each new patient is taught how to make a daily test for glucose in the urine at his home, is given a diet list and a card for recording the daily test, and is told to report in one week. It is usually possible to get the patient sugar free by means of fasting and regulated diet and to teach him to keep himself sugar free by fasting immediately on the reappearance of sugar. The patient is required to report weekly until he maintains a steady sugar free record. After that point is reached, he is asked to report only once a fortnight or once a month.

Severe cases have been referred at once to the house, as have also patients with lighter cases who are unable to get themselves sugar free. The latter class have been sent in for the purpose of discipline and education, since the most satisfactory members of the class have been those who have had a term in the house.

The total number registered in the class since July 1, 1915, has been sixty-nine, of whom thirty were previous members, making an addition since July 1 of thirty-nine. Eighteen of these thirty-nine have entered the class directly from the house, and of the others eight have been sent into the house from the class.

Thirty-seven have attended the class less than five times during the six months, their light attendance being ascribed to the following reasons: prevented by work, two; out of town, five; very light cases, five; unintelligent, twelve; and indifferent, thirteen. The last class may very likely contain some who would more fairly be called unexplained.

During the six months, two have died, both being children less than eight years old.

Thirty have been in regular attendance, from the time of their entrance to the class, and of these the average

attendance per patient has been fifty-seven per cent. The patients in regular attendance are doing well, most of them showing distinct improvement in general condition, and some of them a marked increase in carbohydrate tolerance.

The average size of the class per meeting has been as follows:

July		•		9.0	October .			12.8
August .	•			11.0	November			13.8
September				8.8	December			11.8

Average attendance for twenty-six meetings, 11.2.

Twenty-five visits to the homes of nineteen different patients have been made by the volunteer worker. These visits have been for the purpose of instruction or encouragement of the patient, or for information as to the patient's condition or circumstances. More general visiting of these patients at their homes would be interesting, and might be valuable.

The increase in numbers and in the regularity of attendance, and the general improvement of the patients, appear to show the value of holding the diabetic class and give promise of its increased usefulness in the future.

## THE CARDIAC CLASS

Along similar lines chronic cardiac cases are being organized into a class under the charge of Dr. George P. Denny, Associate in Medicine, and Miss Homans, who report on their work as follows:

The Cardiac Class was started in July, 1915, for the purpose of giving more individual attention to cases of cardiac disease than was otherwise possible. The class meets once a week from 2.30 to 6.30 p.m. No collective talks are given, but each case is taken up separately. A routine visit is made by the volunteer social worker, Miss Homans, on each patient after his first attendance at the

## REPORT OF THE PHYSICIAN-IN-CHIEF

class and again at intervals as seems necessary. For the women and children an exact knowledge of home conditions is most important; for the men the details of their work and the amount of effort it involves.

The work in the home consists in improving hygiene, getting patients to move to a ground floor, and seeing that heavy household work does not fall upon the patient. Among the patients who are at work our effort is to suit the job to the capacity of the patients. Some patients change their work entirely, others continue with their old occupation under certain modifications. We try to get the employer to cooperate in most instances. Unfortunately there are but too many cardiac cases who have never done anything but heavy unskilled labor and who have not the intelligence to take up other work even if it could be provided.

It is among the children that we can hope for the best results. By instructing the parents and school teachers as to the needs of the individual case, very fair supervision can be maintained. Most children do better when going to school. They come five minutes late and leave five minutes early, thus avoiding contact with the others outside the schoolroom. Attempts are made to steer the child into training for a trade suitable to his condition.

Our cases are divided into four classes based on the frequency with which it seems advisable for them to visit the clinic.

1.	Every week	4
2.	Every two weeks	15
	Every month	
	Too sick to come to the Out-Door Department but	
	treated and supervised at home	3
	Total	34

Cases are well followed up and almost all report regularly. This makes the use of our main weapons, rest and

digitalis, fairly effective and in most cases breaks in compensation can be avoided. This is borne out by the fact that it has only been necessary to send three of our patients into the hospital. There have been two deaths among class members, both sudden, and in both cases the patients were perfectly comfortable at home. One was probably embolic in character.

We feel that eventually we can greatly increase the patients' earning capacity and also save the hospital a great deal of money by foreseeing and preventing bad breaks in compensation.

We expect to organize other such classes as workers are available. It would seem that this is a simple and good way to manage chronic cases of certain types. Dealing with groups, each individual gets much from what is told to the class and from suggestions and criticisms made of different members of the class. The spirit of competition enters in as a stimulus toward having a good record to present of oneself at the class meeting. The sociability engendered in the group is a therapeutic benefit to these people. From the medical side it seems that more patients can be managed well in groups than singly. There is also an interesting opportunity for investigation of certain chronic diseases offered by the class of diabetics, cardiacs, etc.

## Growth of the Medical Service

In the short period of its existence the medical ward service of the hospital has almost reached the limit of its growth with the present number of beds and present methods of the study and treatment of medical cases. Medical cases are apt to remain in the wards longer than do surgical cases on account of the longer duration of treatment required for medical patients. This should be the case, for a too shortened period of hospital care al-

most inevitably results in a failure on the part of the patients to get the best result of their hospital stay. The average period of the days of hospital treatment for medical cases in our wards appears from our figures to be relatively short, but this is due to many readmissions of patients coming for a very brief period of salvarsan treatment. If such readmissions should decrease in number the actual number of patients that can be handled per annum in the medical wards necessarily will decrease unless we should discharge patients sooner, a policy in my judgment which would be inadvisable. Under these conditions admissions to the surgical service are likely to be more numerous than to the medical when the two services have an equal number of beds at their disposal. Consequently if the two services are to serve an equal number of the community more beds will be required for the medical service than for the surgical, — a question that should be considered when the possibility of enlarging the hospital comes.

With our present number of ward patients and an ever increasing number of new tests that should be applied in the thorough study of medical cases, the resident staff should be enlarged to permit of each patient having as complete a study as possible and to allow for more productive research on the part of the house staff, without which routine is apt to become too deadly monotonous to allow of progress, and without which we cannot hope to attract to our staff the best type of men. Our staff should be increased, in my opinion, as soon as feasible by the addition of a third group of four house officers and an additional assistant resident physician. This is one of the things most likely to increase the efficiency of the medical service. Another need of the medical service is for a chemist with good training, devoting his entire time to hospital work. At present the greater portion of our chemical work is done by technicians paid for by funds

provided by donors, while the hospital bears almost no part of the expense of the chemical work, now a very important feature of the study of medical diseases.

In the wards the number of patients treated is largely limited by the number of beds and the types of patients admitted. In the ambulatory out-door department service such limitation does not exist. A faulty out-patient service is likely to come as the result of admitting more patients than can be attended to. Our own out-door medical service is growing rapidly and now it can be truly said that the more additional patients we get the less attention each will have. What is the remedy? Either increase the number of physicians on duty if funds are available or limit the number of patients that will be admitted daily. The alternative is to allow the number to continue to increase until the poor service rendered to the patients automatically limits the number coming to the out-door department. The policy which we are to adopt in this part of our work soon will need careful consideration.

# SOCIAL SERVICE WORK

During the year the Social Service work has grown as shown by the report of Miss Cheney, head of the Social Service Department, published separately on another page. Some of this work has been with ward patients, much of it with out-door cases. In the class system just referred to social service work is a large factor. We have sought to develop our Social Service Department as a very integral factor of our medical and surgical work and the social service worker has helped us greatly in our professional duties. That the association is close is shown by our various reports which make it quite evident that we are not quite sure as to what should be called social service and what medical, but each report discusses things that the other takes up and more than one department is

#### REPORT OF THE PHYSICIAN-IN-CHIEF

claiming as its own those workers that Miss Cheney is grouping around her in the social service work. This, it seems to me, is a very desirable state of affairs when the various departments of the hospital overlap their reports, for after all the problem of each is a common one, the best care of our patients.

# STAFF ORGANIZATION

The staff organization as described in the first report has been enlarged by the addition of several members. At first there was a Physician-in-Chief and one Physician. During the year another Physician has been added in the person of Dr. Francis W. Peabody. Dr. Peabody served from the opening of the hospital until September 1, 1915, as Resident Physician. At that time he ended a period of almost eight years in various resident capacities at the Massachusetts General Hospital, Johns Hopkins Hospital, Rockefeller Hospital, and the Peter Bent Brigham Hospital. As the first Resident Physician, Dr. Peabody was placed in a position of very great responsibility, for to him came the decision with regard to many points when decisions set precedents and determined esprit de corps. All of us who served on the staff during his period of residency know full well how successfully he filled this post, and we accredit to him much of the efficiency of the work in the developmental period of the hospital. Dr. Peabody has been appointed also to an Assistant Professorship in Medicine at Harvard and will conduct the courses in clinical microscopy. As Resident Physician Dr. Peabody has been succeeded by Dr. Francis G. Blake.

Four Associates in Medicine have been added to the staff. Of these Dr. Dawson has supervision, with Mrs. Mark, of the class of diabetics in the Out-Door Department; Dr. Denny has supervision, with the aid of Miss

Homans, of a class of cardiac cases in the Out-Door Department and direction of the work of the student assistants. Dr. I. Chandler Walker has charge of the investigation of bronchial asthma, made possible by a gift from Mr. Choate, referred to later on. Dr. O'Hare conducts certain special studies on patients with chronic nephritis. Of these Dr. Dawson and Dr. Denny were formerly medical house officers at the Peter Bent Brigham Hospital, and Dr. Walker formerly Assistant Resident Physician; while Dr. O'Hare has worked from the beginning of the hospital as a volunteer assistant, conducting studies on nephritis. In addition to these, Dr. Welbourn has served as Associate in Medicine in charge of the electro-cardiographic work, succeeding Dr. Levine on July 1, 1915, when the latter began service as a medical house officer. Dr. Fitz, Assistant Resident Physician, has been granted a leave of absence to serve as Assistant Resident Physician at the Rockefeller Hospital in New York and conduct there certain special studies. The vacancies in the Resident Staff thus formed have been filled by the appointment, as Assistant Resident Physicians, of Dr. John A. Wentworth, who came to us from the Hartford Hospital, and of Dr. William W. Cadbury, who comes from a hospital in Canton, China.

The efficiency of the work of the medical service is enhanced greatly by the hearty cooperation and hard work of the house officers. Each four months brings the completion of service of two house officers, and they leave for other fields of work. Their going is the occasion for mingled sentiments of sadness and pleasure. We dislike to part with them, but are glad to have had them for sixteen months of training for their life work. During the current year the following have finished service: Dr. Floyd F. Hatch, who became a surgical house officer at the Massachusetts General Hospital; Dr. D. A. Haller, who became an Assistant Resident Physician at the Peter

Bent Brigham Hospital; Dr. C. K. Drinker, who became an Instructor in Physiology at the Johns Hopkins University; Dr. R. T. Pettit, who began private practice and took charge of a private hospital in Ottawa, Illinois; Dr. W. H. Cook, who became Second Assistant in Pathology at the Boston City Hospital; Dr. Alan C. Woods, who became a Fellow in Experimental Medicine and an Assistant in Ophthalmology at the University of Pennsylvania. Of the house officers who finished prior to this time, Dr. George Benet is now serving with the Harvard Hospital Unit in France; Dr. F. G. Blake is Resident Physician at the Peter Bent Brigham Hospital; Dr. Roger P. Dawson is an Assistant in Medicine at Harvard, an Assistant Physician to the Out-patient Department of the Massachusetts General Hospital, and a practicing physician in Boston; Dr. G. P. Denny is Alumni Assistant in Medicine at Harvard, is Associate in Medicine at the Peter Bent Brigham Hospital, and a practicing physician in Boston; Dr. Reginald Fitz is an Assistant Resident Physician at the Rockefeller Hospital in New York; Dr. Henry S. Forbes is serving in Red Cross work in Serbia; Dr. Paul D. Lamson is an Associate in Experimental Therapeutics at the Johns Hopkins University; Dr. W. R. Sisson is an Instructor in Pediatrics at the Johns Hopkins University; Dr. W. G. Smillie is an Instructor in Preventive Medicine and Hygiene at Harvard; Dr. C. B. Thompson is an Assistant Resident in Psychiatry at the Johns Hopkins Hospital; and Dr. I. Chandler Walker is serving as an Associate in Medicine at the Peter Bent Brigham Hospital as referred to above. This review of what the recent graduates from the medical service of the hospital are doing indicates both the variety of openings there are for men just completing their hospital service and also is an index of the multiplicity of interests the men have had.

# PHYSICIANS PRO TEM

A very pleasant and very profitable innovation in hospital service has been made in having come to the hospital, for a period of one week, some man from a distance, who during that time takes charge of the service, making the ward visits and handling the cases as he would in his own clinic at home. In addition he serves as a visiting lecturer in the Medical School and gives the weekly clinic and lectures to the medical students. During this period he resides in the hospital and has his meals with the hospital staff. This plan brings into the daily life of the institution each year one or more men who hold important positions in medicine and it gives us the opportunity of seeing how others would work with the material which we have for study. In the daily visits and in the life in the hospital there is much opportunity for discussion of methods of examination of patients and of important principles in medicine. Particularly are these visits of value to the members of the Resident Staff who are thus in the very beginning of their medical work brought into intimate contact with men whose names already have become familiar to them during their student days.

Up to the present time three men have come thus to serve the institution, first, Professor William S. Thayer from the Johns Hopkins Hospital in Baltimore; second, Dr. Thomas Lewis of the University College Hospital in London; and third, Professor A. W. Hewlett, Professor of Medicine at the University of Michigan. Each of these men has entered whole-heartedly into the plan and we are greatly indebted to them for making it so successful that our Trustees plan to perpetuate it as a permanent part of the hospital organization.

# SPECIAL GIFTS

However generously endowed, every medical institution which is progressive ever needs additional resources. We are fortunate thus early in our career to have received a generous gift from Mr. Charles F. Choate, Jr., for the special study of bronchial asthma. This fund, which is to be given annually for three years, enables us to employ the entire time of a well-trained man in the study of cases of bronchial asthma and to give him the aid of such apparatus and technicians as he may need. The work under Mr. Choate's gift began in August of the current year and it is too early to report on what has been done. A gift from Dr. F. C. Shattuck has made it possible during the present year to employ a chemical technician who has been engaged in analyses which form a large part of the dietary functional study of cases of nephritis, which studies are of value both in prognosis and in planning the diet to be followed by these patients after they leave the hospital. An anonymous gift has made it possible to employ a second chemical technician on this work during the last few months of the current year. grants from the Proctor Fund of the Harvard Medical School for the Study of Chronic Disease have made it possible for the hospital to have the entire services of one graduate in medicine for the study of cardiac cases by means of the electro-cardiograph, and the part time of another graduate in medicine occupied in the investigation of patients with chronic nephritis.

It is believed that gifts of money can be employed in connection with the hospital work in a way to yield very satisfactory results, inasmuch as the wards and laboratories are well equipped for the intensive study of disease in man. For such study the time of additional graduates in medicine and of technicians form the chief items of expense. The cost of supplies and apparatus in such re-

searches is relatively small and the institution is already equipped with much of such of these as are needed. An annual gift of \$5000 promised over a period of years is one of the most satisfactory forms in which such funds can be offered, inasmuch as this is sufficient to pay the salary of a well-trained investigator and to furnish him the needed technicians and other facilities over and above what the hospital already possesses. Furthermore all such gifts make possible a more minute and comprehensive study of the individual patients that come to the hospital and thereby materially enhance the value of the institution to our patients.

# Usefulness of the Hospital to the Practicing Physician

It is recognized now very generally that the general hospital helps medicine by its work in training nurses, by educating house officers and staff members, and by the study of disease. Perhaps the man who is practicing medicine feels that he does not get much help from the hospital. In some instances undoubtedly he feels that the hospital with a limited staff injures his private practice. At any rate there is not always cordial feeling between the outside physician and the hospital. Usually when there is a lack of cordiality a certain degree of lack of understanding of each other is the basis of such feeling. It would seem that the general hospital should be helpful to the practicing physician and that with the trend of development in medicine this helpfulness should increase if the hospital and physician understand each other and the former seeks to aid the latter.

Disease in man, except in its simpler forms, can be investigated increasingly by more and more types of instruments, which reduce to figures and formulæ or graphic records suitable for comparison from day to day or from case to case data, which in the past had to be expressed

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largely in the form of impressions. Much of this apparatus is complicated and expensive. So it comes about that in many conditions diagnosis is best made where access to such apparatus can be had, and in its multiplicity it is, with few exceptions, the large hospital alone that can provide all of this type of apparatus that is needed.

How can the hospital help the practicing physician when the hospital possesses this apparatus for diagnosis? It seems to me that the hospital has an increasing field for helpfulness in acting as consultant for the practitioner by taking into its wards both free and pay patients for brief thorough observation, and by informing the patient's physician of the result of these observations as a basis for a better treatment of the patient by the physician because of his having this information, and it seems to me that this utilization of the hospital by practitioners should increase. Moreover its increase will help materially the hospital. Obviously this applies to the patient in whom transportation to the hospital will do no injury. For them to come to the hospital for observation, and for their physician to come in to talk over their case with house or visiting staff, means that the hospital gets help in its study from the doctor's knowledge of his patient's history and past condition and the doctor is aided by whatever new data are obtained in the hospital to a better diagnosis and better treatment of his patient. Most assuredly is this worth while to the patient. To stimulate this relationship between hospital and practitioner it has been our custom to send to each physician recommending a patient, free or pay, to the medical service a postcard worded as follows:

# Dear Doctor:

M.....has been admitted to Ward.....on the medical service of the Peter Bent Brigham Hospital. I would be glad to have you come to the Hospital to discuss this case with us. The medical

Very truly yours,
(Signed) Henry A. Christian.

We believe that if more physicians would avail themselves of this invitation than do (many do come, I am glad to say) our hospital could be of more help to the practicing physicians of our community in the way of serving as consultant. When such cases are sent we are glad to furnish to the patient's physician such information as we have been able to obtain of the patient.

Often the physician has an extremely ill patient with home conditions rendering difficult his carrying out of nursing and treatment such as he believes his case should have. Such cases he very commonly sends to the hospital, and this use of medical wards is very much more general than the one referred to above. It is an important way in which the hospital can help the practitioner, and the hospital should continue to be used much for such cases. Admission for diagnosis based on continued observation and the use of diagnostic apparatus in my judgment ought to increase greatly, and this increase should help, not hinder, the practicing physician who uses the hospital for this purpose with a mutual understanding and cordial friendly relationship established between himself and the hospital staff. Hospital observations on cases of this type form the basis for advances in medical science and practice and the more we have the opportunity to study this group of patients the more likely is it that our productive work may lead to advances in medical knowledge. So it would seem that in coöperation both hospital and practicing physician should be helped in their work.

# SPECIAL STUDIES

A number of problems were being studied by members of the staff during the period covered by this report. Some of these investigations have been completed and published; others have been continued and will be mentioned in subsequent annual reports after the papers describing them have been published.

During 1915 the following scientific papers were published by members of the medical staff:

- Christian. The Use of Digitalis in the Various Forms of Cardiac Arrhythmia. Boston Med. and Surg. Jour., 1915, CLXXIII, No. 9, p. 306.
- The Starvation Method Versus Gradual Carbohydrate Reduction as a Time Saver in the Treatment of Diabetes. Boston Med. and Surg. Jour., 1915, CLXXII, No. 25, p. 929.
- —— Transient Auriculoventricular Dissociation with Varying Ventricular Complexes Caused by Digitalis. Arch. of Int. Med., 1915, XVI, p. 341.
- Christian, Frothingham, O'Hare and Woods. Studies of Nephritis. Am. Jour. of Med. Sciences, 1915, CL, No. 5, p. 655.
- FROTHINGHAM. Value of Certain Tests for Diagnosis and Prognosis in Chronic Nephritis. Am. Jour. of Med. Sciences, 1915, CXLIX, No. 6, p. 808.
- FROTHINGHAM and SMILLIE. A Study of Different Nitrogenous Diets in Chronic Nephritis. Arch. of Int. Med., 1915, XV, p. 204.
- FROTHINGHAM and LEVINE. A Study of a Case of Auricular Flutter. Arch. of Int. Med., 1915, XVI, p. 818.
- Fitz. Study XXIII: The Relation Between Amylase Retention and Excretion and Non-Protein Nitrogen Retention in Experimental Uranium Nephritis. Arch. of Int. Med., 1915, XV, p. 524.
- FITZ and QUINBY. Observations on Renal Function in Acute Experimental Unilateral Nephritis. Arch. of Int. Med., 1915, XV, p. 303.

- Drinker. John Halle, Anatomiste, Chirurgien, Modernist. Boston Med. and Surg. Jour., 1915, CLXXII, p. 575.
- Drinker and Drinker. Factors Affecting the Coagulation. Time of Blood. VI. The Effect of Rapid Progressive Hæmorrhage Upon the Factors of Coagulation. Am. Jour. of Physiology, 1915, XXXVI, p. 305.
- Drinker and Hurwitz. The Factors of Coagulation in Primary Pernicious Anæmia. Arch. of Int. Med., 1915, XV, p. 733.
- The Factors of Coagulation in the Experimental Aplastic Anæmia of Benzol Poisoning, with Special Reference to the Origin of Prothrombin. Jour. of Exp. Med., 1915, XXI, p. 401.
- HATCH. Progressive Neuro-Muscular Atrophy (Peroneal Type of Charcot, Marie and Tooth): with Report of Three Cases in a Family without Heredity. Boston Med. and Surg. Jour., 1915, CLXXII, p. 393.
- LEVINE. The Oculocardiac Reflex. An Electro-cardiographic Study with Special Reference to the Differences between Right and Left Vagal and Ocular Pressures in Tabetics and Non-Tabetics. Arch. of Int. Med., 1915, XV, p. 758.
- O'HARE. Study XXIV. The Effect of Theobromin Sodium Salicylate in Acute Chromate Nephritis. Arch. of Int. Med., 1915, XV, p. 1053.
- Peabody. Clinical Studies on the Respiration. No. 1. The Effect of Carbon Dioxid in the Inspired Air on Patients with Cardiac Disease. Arch. of Int. Med., 1915, XVI, p. 846.
- —— Clinical Studies on the Respiration. No. 2. The Acidosis of Chronic Nephritis. Arch. of Int. Med., 1915, XVI, p. 955.
- Sisson and Thompson. Friedländer Bacillus Pneumonia: With Report of Cases. Am. Jour. of Med. Sciences, 1915, CL, No. 5, p. 713.
- Smillie. Potassium Poisoning in Nephritis. Arch. of Int. Med., 1915, XVI, p. 330.
- —— Treatment of Cystinuria. Arch. of Int. Med., 1915, XVI, p. 503.

Walker and Sisson. Experimental Pneumonia (Friedländer Type). Jour. of Exp. Med., 1915, XXII, No. 6, p. 747.

Woods. Studies of Nitrogen Partition in the Blood and Spinal Fluid. With Especial Reference to the Possible Causation of Albuminuric Retinitis. Arch. of Int. Med., 1915, XVI, p. 577.

As during last year, most of the special studies of the medical staff have concerned themselves with chronic nephritis and cardiac disease. Considerable attention has been given to the question of the action and usefulness of diuretic drugs. For several years their effect in acute experimental renal lesions has been investigated with the conclusion that they seemed more likely to be harmful than useful. In man with chronic cardiac lesions and a moderately involved kidney a diuretic such as theocin will produce a striking diuresis and relieve the discomfort occasioned by œdema. Our observations show that in this group diuretics are very useful. In cases of chronic nephritis without cardiac lesion our results with diuretics have been rather negative, but much more work is needed here before the mode of action of and indications for diuretics is understood well enough to justify statements with regard to their utility or possible harmfulness. Some of the most effective diuretics cause much nausea and discomfort to the patient, and some way of obviating this should be found.

We have spent a considerable amount of time in the study of salt and nitrogen excretion in nephritis, both in relation to the efficiency of renal function and in relation to the type of dietary régime the patient should have. These studies are still under way. Interesting in this connection is an observation of the marked toxicity from potassium chloride when substituted for sodium chloride in the diet of a patient with advanced chronic nephritis. In an individual with sound kidneys large amounts of potassium salts can be taken without any harm. In animals

with experimental renal lesions it was shown that the toxicity of potassium salts depended on failure of excretion. With a normal kidney or a moderate degree of acute nephritis potassium salts were harmless, but as soon as the renal lesion became sufficiently marked to retard excretion greatly the potassium salt became very toxic in sharp contrast to sodium salts.

The different forms of non-protein nitrogen in the blood and spinal fluid of nephritic cases have been studied. The total non-protein nitrogen in the spinal fluid was found to be about 25 per cent lower than in the blood, while the urea nitrogen was about the same in each. The relation of albuminuric retinitis to nitrogen retention was considered and it seemed evident that there was no causal relation between the two, though such relationship has been claimed by other investigators.

In many of these studies carefully prepared and accurately weighed diets were necessary. In this we have had the enthusiastic and skillful coöperation of our dietitian, Miss McCullough. The volume of this work that we have called upon her to do is indicated by figures for twelve months which show the serving of 1733 diabetic diets, 1079 standard nephritis diets, 1364 low protein nephritic diets, and many other special diets where each diet represents a day's food for a single patient weighed and served with calculated calory value and known amounts of proteid, fat, and carbohydrate, and in many cases a known amount of sodium chloride or other ingredient.

In cardiac cases the effects of digitalis therapy have been studied and an interesting change produced by overdosage with digitalis has been described. This type of disturbance, a constantly varying type of ventricular complex, was found in several patients by means of electrocardiography. With the electro-cardiograph other cardiac phenomena have been investigated and papers have been

published on vagus effects as produced by ocular pressure and on auricular flutter.

Clinical studies of respiration have shown the following: Normal individuals are affected in a fairly constant manner by breathing air containing increasing amounts of carbon dioxid. Their total ventilation is doubled when the concentration of carbon dioxid was between 4.2 and 5.4 per cent. Patients with cardiac and cardiorenal disease, who are without acidosis, as indicated by the alveolar carbon dioxid tension, react in a manner similar to normal subjects. Patients with cardiac and cardiorenal disease, with acidosis, are much more susceptible to the carbon dioxid in the inspired air. Dyspnea is more easily produced than in normal individuals or in patients without acidosis, and the ventilation may be doubled when the inspired air contains only 2 to 3 per cent carbon dioxid. While acidosis is probably not the sole factor causing the dyspnea in cardiac and cardiorenal disease, it may be an element of considerable importance in producing the clinical picture. In mild cases of uncomplicated chronic nephritis, in which the phenolsulphonephthalein test shows a normal renal function, there is usually little or no acidosis. More advanced cases, showing moderate or even extreme decrease in the phenolsulphonephthalein output, show an acidosis by the "alkali tolerance" test, but there may be no fall in the alveolar carbon dioxid tension. Only in very advanced cases is the acidosis usually so marked as to cause a decrease in the alveolar carbon dioxid tension. Most cases in which the alveolar carbon dioxid tension is below normal show a phenolsulphonephthalein output which is below 10 per cent in two hours. On the other hand cases showing a phenolsulphonephthalein output of "traces" or less may have a normal alveolar carbon dioxid tension. The acidosis of chronic nephritis is due to a retention, resulting from inefficient renal excretion. Acidosis is probably a very con-

stant feature of uremia, but only in a limited number of cases is it of sufficient grade to cause definite clinical symptoms analogous to those seen in advanced diabetes. In these cases the symptoms caused by the acidosis may be relieved by alkali therapy.

A group of cases of pneumonia due to the Friedländer bacillus has been reported and with this organism an experimental pneumonia was produced in animals. These cases and the experimental work show that this organism as well as the pneumococcus can cause quite typical lobar pneumonia.

A group of studies were made of various factors concerned in the coagulation of the blood in pernicious anæmia and other types of anæmia. An apalstic anæmia was successfully produced in animals with benzol. In aplastic anæmia in man and that produced in animals the prothrombin of the blood was found diminished, while in other types of pernicious anæmia this diminution of prothrombin was much less marked or was absent.

A very interesting group of cases of familiar progressive neuro-muscular atrophy was studied and reported. In a patient with cystinuria it was shown that on a low proteid diet, with the addition of sufficient sodium bicarbonate to keep the urine alkaline, the cystin could be kept in solution and the very uncomfortable symptoms due to the formation of cystin calculi could be prevented.

A number of other studies have been made, some of which have been completed while others are still under way. These will be discussed in subsequent reports, it being the plan to refer only to such studies as have been published during the year of a given report.

In closing it is a pleasure to thank the nurses and orderlies for efficient work on the wards and those in charge of the kitchen for their care in preparing diets; without their coöperation many of our studies would have been impossible. Those directing the various administrative and

# REPORT OF THE PHYSICIAN-IN-CHIEF

other divisions of our hospital work, their aids and their employees of all sorts, have contributed largely to the comfort of our patients and the efficiency and pleasure of the medical work.

HENRY A. CHRISTIAN,

Physician-in-Chief.

# Register of Present Members of the Staff

# ABBREVIATIONS

P.B.B.H. — Peter Bent Brigham Hospital
B.C.H. — Boston City Hospital
J.H.H. — Johns Hopkins Hospital
M.G.H. — Massachusetts General
Hospital
Harv. — Harvard University
H.M.S. — Harvard Medical School
J.H.M.S. — Johns Hopkins Medical
School
Hospital
H.O. — House Officer

# BLAKE, FRANCIS GILMAN.

A.B., Dartmouth, 1908; M.D., H.M.S., 1913; Med. H.O., P.B.B.H., July 1, 1913-Nov. 1, 1914; Asst. Res. Phys., P.B.B.H., Nov. 1, 1914-Sept. 1, 1915; Res. Phys., P.B.B.H.

#### BOOTHBY, WALTER MEREDITH.

A.B., Harv., 1902; M.D., H.M.S., 1906; A.M., Harv., 1907; European Clinics for 8 mos., 1907–08; Surg. H.O., B.C.H., 1908–09; Asst. in Anatomy, H.M.S., 1910–14; Asst. in Anæsthesia, Harv. Grad. School of Med., 1912–13; Sheldon Traveling Fellow, Harv., 1912 (Oxford Univ. largely); Anæsthetist, B.C.H., 1912; Supervisor of Anæsthesia, P.B.B.H.; Lect. on Anæsthesia, & Instr. in Anatomy, H.M.S.; Anæsthetist, Harv. Unit, American Ambulance Hosp., Paris, France, April–July, 1915.

#### BURLINGHAM, LOUIS HERBERT.

A.B., Yale, 1902; M.D., J.H.M.S., 1906; House Pupil, M.G.H., 1906-07; Asst. Res. Phys., M.G.H., 1907-12; Asst. Adm., M.G.H., 1912; *1st Asst. Supt.*, P.B.B.H.; Curator, P.B.B.H.

# CADBURY, WILLIAM WARDER.

A.B., Haverford, 1898; A.M., *ibid.*, 1899; M.D., Univ. of Penn., 1902; Res. Phys., Penn. Hosp., Phila., 1903-05; Stud. in Vienna, summer of 1905; Instr. in Pathol. & Pharmacodynamics, Univ. of Penn., 1906-07; Pathol., St. Mary's Hosp., Phila., 1906-07; Pathol., Henry Phipps Inst. for the Study, Treatment & Prevention of Tuberculosis, 1908-09; Visit. Phys., Free Hosp. for Poor Consumptives, White Haven, Pa., 1908-09; Internist, Canton Christian College, Canton, China, 1909-15; Asst. Res. Phys., P.B.B.H.

#### CANNON, WALTER BRADFORD.

A.B., Harv., 1896; A.M., *ibid.*, 1897; M.D., H.M.S., 1900; Instr. in Zoölogy, Harv., 1899–1900; Instr. in Physiol., H.M.S., 1900–02; Asst. Prof. Physiol., H.M.S., 1902–06; Geo. Higginson Prof. Physiol., H.M.S.; Consulting Physiol., P.B.B.H.; Fellow Am. Acad., 1906; Mem., Am. Philos. Soc., 1908; Mem., Nat. Acad. of Sciences, 1914.

# CARTER, JR., DAVID WENDEL.

A.B., Southwestern Univ., 1909; A.M., ibid., 1910; M.D., J.H.M.S. 1914; Med. H.O., P.B.B.H.

CHASE, HENRY MELVILLE.

S.B., Dartmouth, 1897; M.D., H.M.S., 1901; House Pupil, M.H.G., 1901–02; Asst. Surg., Boston Dispensary, 1906–14; Surg., Boston Dispensary; Surg., Berkeley Infirmary; Assoc. in Surg., P.B.B.H.

CHEEVER, DAVID.

A.B., Harv., 1897; M.D., H.M.S., 1901; Surg. H.O., B.C.H., 1901–03; Asst. in Anatomy, H.M.S., 1903–08; Asst. Visit. Surg., B.C.H., 1905–12; Demonstr. in Anatomy, H.M.S., 1908–13; Surg., P.B.B.H.; Asst. Prof. of Surg. Anatomy, H.M.S.; Assoc. in Surg., H.M.S.; Chief Surg., 2d Harv. Unit, British Expeditionary Force, France.

CHRISTIAN, HENRY ASBURY.

A.B. & A.M., Randolph-Macon. 1895; Grad. Stud., Randolph-Macon, 1895–96; M.D., J.H.M.S., 1900; A.M., Harv., 1903; Asst. Pathol., B.C.H., 1900–02; Asst. Visit. Pathol., B.C.H., 1902–05; Asst. Visit. Pathol., Children's Hosp., Boston, 1902–05; Instr. in Pathol., H.M.S., 1902–05; Asst. Visit. Phys., Long Island Hosp., Boston, 1905; in charge of Medical Students, M.G.H., 1905–07; Instr. in Theory & Practice of Physic, H.M.S., 1905–07; Asst. Prof. in Theory & Practice of Physic, H.M.S., 1907–08; Phys.-in-Chief, Carney Hosp., Boston, 1907–12; Dean, Faculty of Med. & of Med. School, Harv., 1908–12; Hersey Prof., Theory & Practice of Physic, H.M.S.; Phys.-in-Chief, P.B.B.H.

Councilman, William Thomas.

M.D., Univ. of Md., 1878; Stud., Univs. of Vienna & Leipzig; Hon. A.M., Harv., 1899; Hon. A.M., J.H.U., 1902; LL.D., Univ. of Md., 1907; LL.D., McGill Univ., 1911; Asst. Prof. in Anatomy, J.H.M.S., 1890-91; Shattuck Prof. of Pathol. Anatomy, H.M.S.; Consulting Pathol., P.B.B.H., Mar. 25, 1912-Aug. 14, 1913; Pathol., P.B.B.H.; Fellow Am. Acad., 1895; Mem., Nat. Acad. of Sciences, 1904; Mem., Bd. of Trustees, Am. Med. Ass'n, 1909 (Chairman, since 1912).

Cushing, Harvey.

A.B., Yale, 1891; A.M., Harv., 1895; M.D., H.M.S., 1895; Hon. F.R.C.S., Lond., 1913; Hon. A.M., Yale, 1913; D.Sc., Washington Univ., 1915; House Pupil, M.G.H., 1895–96; Res. Surg., J.H.H., 1896–1900; Asst., Instr. & Assoc. Prof. in Surgery, J.H.M.S., 1898–1912; Surg.-in-Chief, P.B.B.H.; Moseley Prof. of Surg., H.M.S.; Surg., Harv. Unit, American Ambulance Hosp., Paris, France, April–June 1915.

DAWSON, ROGER PAUL.

A.B., Holy Cross, 1907; M.D., H.M.S., 1911; Med. H.O., Carney Hosp., Boston, Apr. 1911-Aug. 1912; Med. H.O., P.B.B.H., Nov. 1, 1912-Nov. 1, 1913; Fellow in Med., H.M.S., 1914-15; Phys., O.P.D., Carney Hosp., Boston, 1914-15; Asst. Phys., O.P.D., Boston Dispensary; Asst. Phys., O.P.D., M.G.H.; Asst. in Med., H.M.S.; Assoc. in Med., P.B.B.H.

DAY, HILBERT F.

Ph.B., Yale, 1901; M.D., H.M.S., 1905; Surg. H.O., B.C.H., Oct. 1905–Nov. 1907; House Phys., Boston Lying-In Hosp., Nov. 1907–July, 1908; 3d Asst. Visit. Surg. (Gynecol. Dept.), B.C.H., 1908–09; 4th Asst. Visit. Surg., B.C.H., 1909; District Phys., Boston Dispensary, Oct. 1909–Oct. 1912; Asst. to Surgeons, Boston Dispensary, Nov. 1911–Nov. 1912; Asst. Surg., Boston Dispensary, Nov. 1912–Aug. 1914; Surg., Boston Dispensary; Surg., Maverick Dispensary, E. Boston, 1913–14; Assoc. in Surg., P.B.B.H.

DENNY, GEORGE PARKMAN.

A.B., Harv., 1909; M.D., H.M.S., 1913; Med. H.O., P.B.B.H., June 1, 1913-July 1, 1914; Vol., Lab. of Physiol. Research, J.H.M.S., 1914-15; Assoc. in Med., P.B.B.H.; Alumni Asst. in Med., H.M.S.; Asst. in Clin. Pathol., H.M.S.; Attending Phys., St. Luke's Home, Boston.

DEVAN, THOMAS ALAN.

B.S., Rutgers, 1906; M.D., J.H.M.S., 1910; H.O., Presbyterian Hosp., N. Y. C., Jan. 1, 1911-Jan. 1, 1913; 2d Asst. Supt., P.B.B.H.

Edwards, Sumner.

A.B., Bowdoin, 1910; Stud., Hebron Acad., Me., 1910-11; M.D., H.M.S., 1915; Med. H.O., P.B.B.H.

FITZ, REGINALD.

A.B., Harv., 1906; M.D., H.M.S., 1909; Med. House Pupil, M.G.H., 1910-11; Vol. Asst. in Pharmacol. and in Med. Clinic, J.H.H., 1911-12; Sr. Med. H.O., P.B.B.H., Nov. 1, 1912-July 1, 1913; Asst. Res. Phys., P.B.B.H. (granted 1 year leave of absence from Sept. 1, 1915); Fellow in Physiol., H.M.S., 1914-15; Asst. Res. Phys., Rockefeller Hosp., N. Y. C.

FLEMING, LEROY NEWTON.

A.B., Miami, 1910; M.D., J.H.M.S., 1914; Asst. in Surg., J.H.U.; Surg. H.O., P.B.B.H.

FOLIN, OTTO.

S.B., Univ. of Minn., 1892; Ph.D., Univ. of Chicago, 1896; Sc.D., Washington Univ., 1915; Student, Univs. of Sweden & Germany, 1897 & 1898; Asst. Prof. of Physiol. Chem., Univ. of W. Va., 1899–1900; Research Chem., McLean Hosp., Waverley, 1900–08; Assoc. Prof. of Biol. Chem., H.M.S., 1907–09; Hamilton Kuhn Prof. of Biol. Chem., H.M.S.; Consulting Chem., P.B.B.H.; Chem., M.G.H.

Frothingham, Jr., Channing.

A.B., Harv., 1902; M.D., H.M.S., 1906; Med. H.O., B.C.H., 1906–07; Asst. Visit. Phys., Carney Hosp., O.P.D., Boston, 1908–12; Sec'y, Faculty of Med., Harv., 1908–13; Asst. in Theory & Practice of Physic, H.M.S., 1908–13; Phys., P.B.B.H.; Instr. in Med., H.M.S.

GOODALL, HARRY WINFRED.

A.B., Dartmouth, 1898; M.D., H.M.S., 1902; House Pupil, M.G.H., 1902–03; House Pupil, Boston Lying-In Hosp., 1903; Phys., Boston Dispensary; Asst. Visit. Phys., N.E. Baptist Hosp.; Assoc. in Med., P.B.B.H.; Instr. in Med., Harv. Grad. School of Med.

GOODPASTURE, ERNEST WILLIAM.

A.B., Vanderbilt, 1907; M.D., J.H.M.S., 1912; Rockefeller Fellow in Pathol., J.H.U., 1912-14; Pathol., Union Protestant Infirmary, Baltimore, 1913-14; Asst. Res. Pathol., J.H.H., 1913-14; Act. Res. Pathol., J.H.H., 1914-15; Instr. in Pathol., J.H.M.S., 1914-15; Res. Pathol., P.B.B.H.; Instr. in Pathol., H.M.S.

GRAY, HORACE.

A.B., Harv., 1909; M.D., H.M.S., 1914; Med. H.O., P.B.B.H.

GREY, ERNEST GEORGE.

A.B., Univ. of Wis., 1907; Asst. in Anatomy, *ibid.*, 1907-08; Stud. in Med., Univ. of Wis. Med. School, 1907-08; M.D., J.H.M.S., 1911; Res.

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H.O., J.H.H., 1911-12; Surg. H.O., P.B.B.H., Nov. 1, 1912-Feb. 12, 1914; Asst. Res. Surg., P.B.B.H.; Asst. in Surg., H.M.S.

HALLER, DAVID ALEXANDER.

A.B., Hampden-Sidney, 1908; M.D., Columbia Univ. Col. of Phys. & Surg., 1913; Med. H.O., P.B.B.H., Nov. 1, 1913-Mar. 1, 1915; Asst. Res. Phys., P.B.B.H.

Homans, John.

A.B., Harv., 1899; M.D., H.M.S., 1903; House Pupil, M.G.H., 1903–04; Asst. in Hunterian Lab., J.H.M.S., 1908–09; Vol. Asst. Surg., Children's Hosp., Boston, 1909–10; Surg., M.G.H., O.P.D., 1910–12; Asst. in Surg., H.M.S., 1910–13; Surg., P.B.B.H.; Surg., Boston Dispensary, 1913–14; Assoc. in Surg., H.M.S.

HORRAX, GILBERT.

A.B., Williams, 1909; M.D., J.H.M.S., 1913; Surg. H.O., P.B.B.H., July 1, 1913-Nov. 1, 1914; Arthur Tracy Cabot Fellow in Charge of Lab. of Surg. Research, H.M.S., 1914-15; Asst. Res. Surg., P.B.B.H.

Howard, Herbert Burr.

A.B., Harv., 1881; M.D., H.M.S., 1884; Asst. Phys., State Infirmary, Tewksbury, Mass., 1884–85; In practice at Idaho Springs, Colo., 1885–87; Asst. Phys., State Infirmary, Tewksbury, Mass., 1887–91; Supt., *ibid.*, 1891–97; Res. Phys., M.G.H., 1897–1908; Supt., P.B.B.H.; Mem., Mass. State Bd. of Insanity, 1898–1913 (Chairman, 1908–13); Pres., Am. Hosp. Ass'n, 1909–10.

JACOBSON, CONRAD.

B.S., Beloit, 1900; Grad. Stud. 3 summer qrs., Univ. of Chicago; Asst. Prof. of Chemistry & Bacteriology, Armour Inst. of Technology, 1903-05; Research Asst. in Pathol., Univ. of Chicago, 1907-08; M.D., J.H.M.S., 1911; Asst. in Surg., Hunterian Lab., J.H.M.S., 1911-12; Asst. Res. Surg., P.B.B.H., Sept. 1, 1912-Sept. 1, 1915; Res. Surg., P.B.B.H.; Asst. in Surg., H.M.S.

JANNEY, JAMES CRAIK.

A.B., Harv., 1911; M.D., H.M.S., 1915; Surg. H.O., P.B.B.H.

Jones, Merritt LaCount.

S.B., Univ. of Wis., 1912; M.D., H.M.S., 1915; Surg. H.O., P.B.B.H.

LADD, WILLIAM SARGENT.

B.S., Amherst, 1910; M.D., Columbia Univ. Col. of Phys. & Surg., 1915; *Med. H.O.*, *P.B.B.H.* 

LEVINE, SAMUEL ALBERT.

A.B., Harv., 1911; M.D., H.M.S., 1914; Assoc. in Med. (electrocardiographic work), P.B.B.H., July 1, 1914-July 1, 1915; Med. H.O., P.B.B.H.

MacPherson, Donald John.

B.S., Univ. of Rochester, 1911; M.D., H.M.S., 1915; Med. H.O., P.B.B.H.

MARVIN, FRANK WILLIAM.

A.B., Harv., 1910; M.D., H.M.S., 1914; House Pupil, M.G.H., 1914-15; Surg. H.O., P.B.B.H.

McCANN, WILLIAM SHARP.

A.B., Ohio State Univ., 1911; M.D., Cornell Univ. Med. College, 1915; Asst. Res. Phys., General Memorial Hosp., N. Y. C., June 1, 1915-Oct. 1, 1915; Surg. H.O., P.B.B.H.

MILLET, JOHN ALFRED PARSONS.

A.B., Harv., 1910; M.D., H.M.S., 1914; Med. H.O., P.B.B.H.

Montgomery, James Blaine.

A.B., Dartmouth, 1911; M.D., H.M.S., 1915; Surg. H.O., P.B.B.H.

O'HARE, JAMES PATRICK.

A.B., Harv., 1908; M.D., H.M.S., 1911; Med. H.O., So. Dept., B.C.H., July 1, 1911–Oct. 1, 1911; Med. H.O., Carney Hosp., Boston, 1912–13; Fellow in Med., H.M.S., 1913–15; Asst. Visit. Phys., Carney Hosp., 1913–15; Asst. Visit. Phys., B.C.H.; Assoc. in Med., P.B.B.H.; Asst. in Med., H.M.S.

PEABODY, FRANCIS WELD.

A.B., Harv., 1903; M.D., H.M.S., 1907; House Pupil, M.G.H., 1907-08; Asst. Res. Phys., J.H.H., 1908-09; Fellow in Pathol., J.H.U., 1909-10; Stud. of Chemistry, Univ. of Berlin, Germany, 1910; Asst. Res. Phys., Hosp. of Rockefeller Inst., 1911-12; Asst., Rockefeller Inst., 1911-12; Res. Phys., P.B.B.H., Nov. 1, 1912-Sept. 1, 1915 (granted leave of absence from Mar. 1, 1914 to Jan. 1, 1915, to serve as a member of the China Medical Commission of the Rockefeller Foundation); Asst. Visit. Phys., P.B.B.H., Sept. 1, 1915-Dec. 9, 1915; Phys., P.B.B.H.; Alumni Asst. in Med., H.M.S., 1913-15; Asst. Prof. in Med., H.M.S.; Consulting Phys., Collis P. Huntington Memorial Hosp., Boston.

RICHARDSON, HENRY BARBER.

A.B., Harv., 1910; M.D., H.M.S., 1914; Med. H.O., P.B.B.H.

STONE, GEORGE HENRY.

A.B., Bowdoin, 1905; M.D., Bowdoin Med. School, 1908; H.O., Maine General Hosp., 1908–09; In practice, Clinton, Mass., 1909–11; H.O., B.C.H., Jan. 1912–Jan. 1913; Executive Asst., B.C.H., Jan. 1913–Feb. 1915; 3d Asst. Supt., P.B.B.H.

VAN GORDER, GEORGE WILSON.

A.B., Williams, 1911; M.D., H.M.S., 1915; Surg., H.O., P.B.B.H.

WALKER CLIFFORD BLACK.

S.B., Univ. of Calif., 1906; Med. Stud., Univ. of Calif. Med. School, 1906-09; M.D., J.H.M.S., 1911; M.A., J.H.U., 1912; Asst. to Dr. Cushing, 1911-12; Sr. Ophthal. House Surg., Mass. Char. Eye & Ear Infirmary, Boston, 1913; Sr. Aural House Surg., *ibid.*, 1914; Assoc. in Surg., P.B.B.H.; Asst. in Ophthal., H.M.S.

WALKER, ISAAC CHANDLER.

A.B., J.H.U., 1905; M.D., J.H.M.S., 1909; Grad. Stud., Lab. of Theory & Practice of Physic, H.M.S., 1910–11; Med. H.O., Carney Hosp., Boston, 1910–11; Lect. on Clin. Microscopy & Physical Diagnosis, Univ. of Iowa, 1911–12; Stud. of Prof. Morawitz, Freiburg, Germany, 1912; Research Rockefeller Hosp., N. Y. C., 1912; Sr. Med. H.O., P.B.B.H., Nov. 1, 1912–Mar. 1, 1913; Asst. Res. Phys., P.B.B.H., Mar. 1, 1913–Mar. 1, 1914; Act. Res. Phys., P.B.B.H., Mar. 1, 1914–Jan. 1, 1915; Asst. Res. Phys., P.B.B.H., Jan. 1, 1915–Mar. 1, 1915 (granted leave of absence from Mar. 1, 1915–Sept. 1, 1915); Medical Chief, Hospital A 32 bis Passy Yonne, France, Mar. 1, 1915–July 1, 1915; Assoc. in Med., P.B.B.H.; Asst. in Pharmacol., H.M.S.; Alumni Asst. in Med., H.M.S.

# REGISTER OF PRESENT MEMBERS OF THE STAFF

Welbourn, Marshall Agnew.

B.S., Univ. of Mich., 1913; M.D., Univ. of Mich. Med. School, 1915; Assoc. in Med. (electrocardiographic work), P.B.B.H.

Wentworth, John Alexander.

A.B., Bowdoin, 1909; M.D., H.M.S., 1913; H.O., Hartford Hosp., Hartford, Conn., Sept. 1, 1913-May 15, 1915; Sr. Med. H.O., P.B.B.H., July 1, 1915-Nov. 1, 1915; Asst. Res. Phys., P.B.B.H.

Wood, NATHANIEL KNIGHT.

A.B., Harv., 1897; M.D., H.M.S., 1901; H.O., B.C.H., Jan. 1902-Mar. 1904; H.O., Boston Lying-In Hosp., June 1904-Dec. 1904; Visit. Phys., Carney Hosp., O.P.D., Oct. 1907-Oct. 1912; Visit. Phys., Boston Consumptives' Hosp., O.P.D.; Phys., Boston Dispensary; Assoc. in Med., P.B.B.H.

Woodward, Harry Whiting.

A.B., Bowdoin, 1910; M.D., H.M.S., 1915; Surg. H.O., P.B.B.H.

# Register of Former Members of the Staff

Bagley, Jr., Charles.

M.D., Univ. of Md., 1904; B.A., Loyola, 1911; Asst. Res. Phys., Univ. Hosp., Baltimore, 1904–05; Asst. Res. Surg., Univ. Hosp., Baltimore, 1905–06; Med. Supt., Hebrew Hosp., Baltimore, 1906–10; Visit. Surg., Hebrew Hosp., Baltimore, 1910; Consulting Surg., Baltimore Eye, Ear & Throat Charity Hosp., 1910; Capt., Med. Corps., 5 Inf. Md. Nat. Guard; Asst. Res. Surg., P.B.B.H., Jan. 1, 1913–Jan. 1, 1914; Visit. Surg., Church Home & Infirmary, Baltimore.

Bener, George.

Student for 3 yrs., Univ. of S.C., and Univ. of Va.; M.D., H.M.S., 1913; Med. H.O., P.B.B.H., June 1, 1913-July 1, 1914; Sr. Surg. H.O., St. Luke's Hosp., Chicago, July 1, 1914-Jan. 1, 1915; Lab. Asst., Harv. Unit, American Ambulance Hosp., Paris, France, April-July 1915; Capt. & Asst. Surg., 2d Harv. Unit, British Expeditionary Force, France.

BOEHM, JULIUS BENJAMIN.

B.S., St. Louis Univ., 1910; M.D., J.H.M.S., 1914; Surg. H.O., P.B.B.H., Nov. 1, 1914-Nov. 1, 1915 (resigned); Res. Surg., Greenpoint Hosp., Brooklyn, N. Y.

COBB, STANLEY.

A.B., Harv., 1910; M.D., H.M.S., 1914; Surg. H.O., P.B.B.H., July 1, 1914-July 1, 1915; Vol., Lab. of Physiol. Research, J.H.M.S.

COOK, WARD HANCE.

A.B., Univ. of Kan., 1909; A.M., *ibid.*, 1910; Fellow in Zoölogy, *ibid.*, 1909–10; Instr. in Embryology & Histology, *ibid.*, 1910; M.D., H.M.S., 1914; Med. H.O., P.B.B.H., July 1, 1914–July 10, 1915 (resigned); 2d Asst. in Pathol., B.C.H.

CUTLER, ELLIOTT CARR.

A.B., Harv., 1909; M.D., H.M.S., 1913; Surg. H.O., P.B.B.H., Nov. 1, 1913-Mar. 1, 1915; Res. Surg., Harv. Unit, American Ambulance Hosp., Paris, France, April-July 1915; Res. Surg., M.G.H.; Alumni Asst. in Surg., H.M.S.

DRINKER, CECIL KENT.

B.S., Haverford, 1908; M.D., Univ. of Penn., 1913; Med. H.O., P.B.B.H., Mar. 1, 1914-July 1, 1915; Instr. in Physiol., J.H.M.S.

Forbes, Henry Stone.

A.B., Harv., 1905; Philippine Islands, 1905-06; Harv. (Grad. School), 1906-07; M.D., H.M.S., 1911; Med. H.O., B.C.H., 1911-13; Sr. Med. H.O., P.B.B.H., June 1, 1913-Nov. 1, 1913; Phys. for Men, Infirmary, Univ. of Calif., Berkeley, Calif., Mar. 1914-July 1915; American Red Cross, Serbia.

GOETSCH, EMIL.

S.B., Univ. of Chicago, 1903; Ph.D., ibid., 1906; Fellow, Asst. and Assoc. in Anatomy, ibid., 1904-08; Research Asst., Dept. of Exp. Therapeutics,

# REGISTER OF FORMER MEMBERS OF THE STAFF

*ibid.*, 1908–09; Rush. Med. Col., 1906–07; M.D., J.H.M.S., 1909; Asst. in Surg., J.H.M.S., 1909–10; Asst. Res. Surg., J.H.H., 1910–12; Res. Surg., P.B.B.H., Sept. 1, 1912–Sept. 1, 1915; Asst. in Surg., H.M.S., 1912–15; Assoc. Surg., J.H.H.

#### HARVEY, SAMUEL CLARK.

Ph.B., Yale, 1907; M.D., Yale Med. School, 1911; Alonzo Clark Fellow, Columbia Univ., 1911–12; Instr. in Pathol., *ibid.*, 1912–13; Asst. Res. Phys., Loomis Sanatorium, Loomis, N. Y., 1913–14; Surg. H.O., P.B.B.H., Nov. 1, 1914–Nov. 1, 1915 (resigned); Arthur Tracy Cabot Fellow in Charge of Lab. of Surg. Research, H.M.S.

#### HATCH, FLOYD FROST.

A.B., Univ. of Utah, 1912; M.D., H.M.S., 1914; Med. H.O., P.B.B.H., Mar. 1, 1914–Jan. 4, 1915 (leave of absence, Jan. 4, 1915–Feb. 28, 1915); Surg. House Pupil, M.G.H.

# HURWITZ, SAMUEL HAYMANN.

A.B., Harv., 1907; A.M., *ibid.*, 1908; Special Student, Univ. of Strassburg, Germany, 1909–10; Special Student, Inst. of Infectious Diseases, Berlin, Germany, summer 1911; M.D., J.H.M.S., 1912; Res. H.O., J.H.H., 1912–13; Surg. H.O., P.B.B.H., Nov. 1, 1913–Mar. 1, 1915; Instr. in Research Med., Geo. Wms. Hooper Foundation for Med. Research, Univ. of Calif., San Francisco, Calif.

# JACK, WILLIAM DAVID.

A.B., Creighton, 1908; Univ. of Chicago (Grad. Student), 1909–10; M.D., J.H.M.S., 1914; Surg. H.O., P.B.B.H., July 1, 1914–Nov. 1, 1915; Asst. Res., Brady Inst.; 2d Harv. Unit, British Expeditionary Force, France.

#### LAMSON, PAUL DUDLEY.

A.B., Harv., 1905; M.D., H.M.S., 1911; Med. House Pupil, M.G.H., Mar. 1909-Aug. 1910; Pharm. Lab., Univ. of Wurzburg, Germany, 1911-13; Lect. Asst. in Pharm., Univ. of Wurzburg, Germany, 1912-13; Pharm. Lab., Univ. College, London Univ. and Cardiac Dept. of London Hosp., England, April-Aug. 1913; Sheldon Traveling Fellowship, 1911-13; Asst. Res. Phys., P.B.B.H., Oct. 1, 1913-Oct. 15, 1914; Asst. in Exp. Therapeutics, J.H.M.S., 1914-15; Assoc. in Exp. Therapeutics, J.H.M.S.

# LEHMAN, EDWIN PARTRIDGE.

A.B., Williams, 1910; M.D., H.M.S., 1914; Surg. H.O., P.B.B.H., July 1, 1914–July 1, 1915; Asst. Res. Surg., Barnes Hosp., St. Louis, Mo.

#### LIEB, CLARENCE WILLIAM.

A.B., Colorado, 1908; A.M., *ibid.*, 1909; M.D., H.M.S., 1914; *Pathol. H.O.*, *P.B.B.H.*, *Apr. 1*, 1914–June 6, 1914 (resigned); Phys., Denver Colo., 1914–15; Phys., "The Glen Springs," Watkins, N. Y.

# LUGER, ALFRED.

M.D., Univ. of Vienna; Demonstrator, Histological Inst., Univ. of Vienna, May 1909-May 1911; Klinik Neusser, Vienna, May 1911-Sept. 1911; Director, Roentgen Lab., Klinik Neusser, Vienna, Sept. 1911-Dec. 1912; Roentgenologist, P.B.B.H., Jan. 1, 1913-June 1, 1914 (leave of absence, June 1, 1914-Dec. 14, 1915); Asst. in Roentgenology & Asst. in Med., H.M.S., 1914-15; Austrian Army.

Morton, John Jamieson.

A.B., Amherst, 1907; M.D., J.H.M.S., 1913; Surg. H.O., P.B.B.H., Mar. 1, 1913–July 1, 1914; Fellow in Pathol., Rockefeller Inst., N. Y., July 1, 1914 – Sept. 1, 1915; House Surg., M.G.H.

PETTIT, ROSWELL TALMADGE.

S.B., Univ. of Chicago, 1908; M.D., Rush, 1913; Med. H.O., P.B.B.H., Mar. 1, 1914–July 1, 1915; Phys., St. Margaret's Hosp., Spring Valley, Ill.; Asst. Med. Director, Ottawa Tuberculosis Colony, Ottawa, Ill.; 1st Lieut. Med. Reserve Corps, U. S. Army.

RAND, CARL WHEELER.

A.B., Williams, 1908; A.M., *ibid.*, 1909; M.D., J.H.M.S., 1912; Res. H.O., J.H.H., 1912–13; Asst. Res. Surg., P.B.B.H., Oct. 1, 1913–Nov. 1, 1914; House Surg., Mercy Hosp., Chicago, Dec. 1, 1914–Nov. 1, 1915; Surg., Los Angeles, Calif.

RHEA, LAWRENCE JOSEPH.

B.S., Univ. of Texas, 1901; M.D., J.H.M.S., 1905; H.O. in Pathol., B.C.H., 1906-07; 2d Asst. in Pathol., B.C.H., Jan. 1907-Aug. 1907; 1st Asst. in Pathol., B.C.H., Aug. 1907-Sept. 1908; Asst. Visit. Pathol., B.C.H., 1908-09; Asst. in Pathol., H.M.S., 1908-09; Instr. in Pathol., H.M.S., 1909-10; Asst. Pathol., B.C.H., 1909-10; Director of Pathol. Lab. and Pathol., Montreal Gen'l Hosp., 1910-12; Lect. in Pathol., McGill Univ., 1910-11; Asst. Prof. of Pathol., McGill Univ., 1911-12; Res. Pathol., P.B.B.H., July 1, 1912-Oct. 1, 1913; Director of Pathol. Lab., Montreal Gen'l Hosp.; McGill Gen'l Hosp. Overseas Contingent, France.

Sisson, Warren Richard.

A.B., Colgate, 1906; Student of Med., Freiburg, Germany (summer semester), 1910; Student, Univ. of Munchen (winter semester), 1910–11; Student, Univ. of Heidelberg (summer semester), 1911; M.D., J.H.M.S., 1912; House Pupil, M.G.H. (Children's Med. Ward), July 1912–Jan. 1913; Med. H.O., P.B.B.H., Mar. 1, 1913–Mar. 1, 1914; Res. Pathol., P.B.B.H., Mar. 1, 1914–Apr. 1, 1915; Instr. in Pathol., H.M.S., 1914–15; H.O., B.C.H. (So. Dept.), summer 1915; Sr. H.O., Boston Floating Hosp., July 1, 1915–Sept. 15, 1915; Instr. in Pediatrics, J.H.M.S.

SMILLIE, WILSON GEORGE.

A.B., Colorado, 1908; M.D., H.M.S., 1912; Med. H.O., P.B.B.H., Nov. 1, 1912-Mar. 1, 1914; Asst. Res. Phys., P.B.B.H., Mar. 1, 1914-Sept. 1, 1914; Asst. Instr., Dept. of Preventive Med., H.M.S., 1914-15; Instr., Dept. of Preventive Med., H.M.S.

SMITH-PETERSEN, MARIUS NYGAARD.

B.S., Univ. of Wis., 1910; Univ. of Wis. Med. School, 1910–12; M.D., H.M.S., 1914; Surg. H.O., P.B.B.H., July 1, 1914–Nov. 1, 1915; Harv. Unit, American Ambulance Hosp., Paris, France, April–July, 1915; House Pupil, M.G.H. (Orthopedic Service).

STODDARD, JAMES LEAVITT.

A.B., Harv., 1910; M.D., H.M.S., 1914; Pathol. H.O., P.B.B.H., July I, 1914-July I, 1915; Acting Res. Pathol., P.B.B.H., July I, 1915-Sept. I, 1915; Research Fellow in Pathol., H.M.S.

#### REGISTER OF FORMER MEMBERS OF THE STAFF

THOMPSON, CHARLES BAKER.

A.B., Haverford, 1909; M.D., J.H.M.S., 1913; Med. H.O., P.B.B.H., Nov. 1, 1913-Nov. 1, 1914; 2d Asst. Res., Phipps Psychiatric Clinic, J.H.H., 1914-15; 1st Asst. Res., Phipps Psychiatric Clinic, J.H.H.

Towne, Edward Bancroft.

A.B., Harv., 1906 (1907); M.D., H.M.S., 1913; Surg. H.O., P.B.B.H., July 1, 1913-Nov. 1, 1914; Asst. Res. Surg., P.B.B.H., Nov. 1, 1914-Nov. 1, 1915; Lieut. Col. & Surg., 2d Harvard Unit, British Expeditionary Force, France.

WATKINS, S. SHELTON.

A.B., Central Univ. of Ky., 1908; A.M., *ibid.*, 1909; M.D., J.H.M.S., 1914; Med. & Surg. H.O., Church Home & Infirmary, Baltimore, Jan. 1914-Apr. 1914; 3d Asst. Supt., P.B.B.H., May 1, 1914-Jan. 15, 1915; Asst. in Clinical Laryngology, J.H.M.S.; Asst. Disp. Laryngologist, J.H.H.

WEGEFORTH, PAUL.

A.B., J.H.U., 1908; Student of Med., Strassburg & Berlin, Germany, 1909–11; M.D., J.H.M.S., 1912; Surg. H.O., P.B.B.H., Nov. 1, 1913–Mar. 1, 1914; Asst. Res. Phys., Church Home & Infirmary, Baltimore, 1914; Phys., San Diego, Calif.

Woods, Alan Churchill.

A.B., J.H.U., 1910; M.D., J.H.M.S., 1914; Med. H.O., P.B.B.H., July 1, 1914-Nov. 1, 1915; Fellow in Exp. Med., & Asst. in Ophthal., Univ. of Penn. Med. School, Philadelphia.

# Officers of the Institution

January 1, 1916

President

CHARLES P. CURTIS

Treasurer

EDMUND D. CODMAN

Secretary

Laurence H. H. Johnson

#### MEMBERS OF THE CORPORATION

May	8,	1902		Alexander Cochrane	40 Central St.,	Boston
May	8,	1902		Edmund D. Codman	27 Kilby St.,	Boston
Apr.	15,	1915		Charles P. Curtis	Ames Building,	Boston
June	16,	1909	•	*Irvin McD. Garfield	30 State St.,	Boston
Oct.	2,	1902		Augustus Hemenway	53 State St.,	Boston
May	8,	1902		Henry S. Howe	89 Franklin St.,	Boston
May	8,	1902		Walter Hunnewell	87 Milk St.,	Boston
May	8,	1902		Laurence H. H. Johnson	27 Kilby St.,	Boston
June	16,	1909		*John P. Reynolds	30 State St.,	Boston
May	8,	1902		William R. Trask	40 State St.,	Boston

#### STANDING COMMITTEES OF THE TRUSTEES

Building Committee

John P. Reynolds, Chairman Charles P. Curtis Walter Hunnewell Laurence H. H. Johnson Herbert B. Howard, M.D., Secretary

Auditing Committee

# WILLIAM ROPES TRASK

<sup>\*</sup> Appointed by the Governor of the Commonwealth under an Act approved May 8, 1909.

# OFFICERS OF THE INSTITUTION

Committee on Finance

Edmund D. Codman
Walter Hunnewell
Henry S. Howe
Laurence H. H. Johnson

Committee on Nominations

CHARLES P. CURTIS EDMUND D. CODMAN

# RECORD OF VISITING COMMITTEE FOR 1915

ALEXANDER COCHRANE	January
ALEXANDER COCHRANE	February
HENRY S. Howe	March
JOHN P. REYNOLDS	April
Laurence H. H. Johnson	May
WALTER HUNNEWELL	June
Edmund D. Codman	July
WILLIAM R. TRASK	August
IRVIN McD. GARFIELD	September
CHARLES P. CURTIS	October
CHARLES P. CURTIS	November
Augustus Hemenway	December

#### VISITING COMMITTEE FOR 1916

Charles P. Curtis	January
ALEXANDER COCHRANE	
JOHN P. REYNOLDS	March
HENRY S. Howe	April
Laurence H. H. Johnson	May
WALTER HUNNEWELL	June
EDMUND D. CODMAN	July
WILLIAM R. TRASK	
IRVIN McD. GARFIELD	September
Charles P. Curtis	October
Augustus Hemenway	December

# MEDICAL ADVISER TO CORPORATION

Appointed

July 9, 1914 Frederick C. Shattuck, M.D.

# EXECUTIVE COMMITTEE OF THE STAFF

Henry A. Christian, M.D.
WILLIAM T. COUNCILMAN, M.D.
HARVEY CUSHING, M.D.
HERBERT B. HOWARD, M.D., Secretary

#### ADMINISTRATIVE DEPARTMENT

Superintendent

# Service began

May 1, 1908 HERBERT B. HOWARD, M.D.

# Assistant Superintendents

Oct. 19, 1912 Louis H. Burlingham, M.D., Curator

Aug. 1, 1913 Thomas A. Devan, M.D.

Feb. 1, 1915 George H. Stone, M.D.

#### BOARD OF CONSULTATION

# Appointed

Mar. 25, 1912 WALTER B. CANNON, M.D., Consulting Physiologist

Mar. 25, 1912 Otto Folin, Ph.D., Consulting Chemist

#### MEDICAL DEPARTMENT

#### Service began May 1, 1912 HENRY A. CHRISTIAN, M.D., Physician-in-Chief July 1, 1912 CHANNING FROTHINGHAM, Jr., M.D., Physician \*Dec. 9, 1915 Francis W. Peabody, M.D., Physician Dec. 12, 1912 HARRY W. GOODALL, M.D., Associate in Medicine (Boston Dispensary) Dec. 12, 1912 NATHANIEL K. WOOD, M.D., Associate in Medicine (Boston Dispensary) \*Sept. 1, 1915 I. CHANDLER WALKER, M.D., Associate in Medicine (Choate Asthma Fund) \*July 1, 1915 GEORGE P. DENNY, M.D., Associate in Medicine (Cardiac Cases) \*July 1, 1915 ROGER P. DAWSON, M.D., Associate in Medicine (Diabetic Cases) JAMES P. O'HARE, M.D., Associate in Medicine July 1, 1915 (Chronic Nephritic Cases) \*Sept. 1, 1915 Francis G. Blake, M.D., Resident Physician \*July 1, 1913 REGINALD FITZ, M.D., Assistant Resident Physician (Leave of absence from Sept. 1, 1915, to Sept. 1, 1916) \*Mar. 1, 1915 DAVID A. HALLER, M.D., Assistant Resident Physician Nov. 1, 1915 JOHN A. WENTWORTH, M.D., Assistant Resident Physician Nov. 1, 1915 WILLIAM W. CADBURY, M.D., Assistant Resident Physician ALBION W. HEWLETT, M.D., Physician pro tempore May 1,-May 4, 1915 (Service not completed because of illness)

# OFFICERS OF THE INSTITUTION

# SURGICAL DEPARTMENT

Service began	
Sept. 1, 1912	HARVEY CUSHING, M.D., Surgeon-in-Chief
Oct. 1, 1912	DAVID CHEEVER, M.D., Surgeon
May 1, 1912	John Homans, M.D., Surgeon
Dec. 11, 1913	WALTER M. BOOTHBY, M.D., Supervisor of Anæsthesia
Nov. 17, 1914	HENRY M. CHASE, M.D., Associate in Surgery
	(Boston Dispensary)
Nov. 17, 1914	HILBERT F. DAY, M.D., Associate in Surgery
	(Boston Dispensary)
Mar. 1, 1915	CLIFFORD B. WALKER, M.D., Associate in Surgery
	(Eye, Ear, Nose and Throat Cases)
*Sept. 1, 1915	Conrad Jacobson, M.D., Resident Surgeon
*Feb. 12, 1914	Ernest G. Grey, M.D., Assistant Resident Surgeon
*Nov. 1, 1915	GILBERT HORRAX, M.D., Assistant Resident Surgeon

# PATHOLOGICAL DEPARTMENT

# Service began

\*Aug. 14, 1913 WILLIAM T. COUNCILMAN, M.D., Pathologist

Sept. 1, 1915 Ernest W. Goodpasture, M.D., Resident Pathologist

#### ROENTGENOLOGIST

June 1, 1914 GLADYS L. CARR, M.D., Pro tempore

# MEDICAL HOUSE OFFICERS

Service	began	Service completed
Nov.	1, 1913	DAVID A. HALLER, M.D Mar. 1, 1915
Mar.	1, 1914	FLOYD F. HATCH, M.D Jan. 4, 1915
		(Leave of absence to Feb. 28, 1915)
Mar.	1, 1914	Roswell T. Pettit, M.D July 1, 1915
Mar.	1, 1914	CECIL K. DRINKER, M.D July 1, 1915
July	1, 1914	WARD H. COOK, M.D. (Resigned) . July 10, 1915
July	1, 1914	ALAN C. Woods, M.D Nov. 1, 1915
		Service will end
Nov.	1, 1914	Horace Gray, M.D Mar. 1, 1916
~ ~		
Nov.	1, 1914	JOHN A. P. MILLET, M.D Mar. 1, 1916
Nov. Jan.		JOHN A. P. MILLET, M.D Mar. 1, 1916 DAVID W. CARTER, M.D July 1, 1916
	4, 1915	
Jan.	4, 1915	David W. Carter, M.D July 1, 1916 Henry B. Richardson, M.D July 1, 1916
Jan. Mar.	4, 1915 1, 1915	David W. Carter, M.D July 1, 1916 Henry B. Richardson, M.D July 1, 1916 Samuel A. Levine, M.D Nov. 1, 1916
Jan. Mar. *July	4, 1915	David W. Carter, M.D July 1, 1916 Henry B. Richardson, M.D July 1, 1916 Samuel A. Levine, M.D Nov. 1, 1916
Jan. Mar. *July July	4, 1915	David W. Carter, M.D July 1, 1916 Henry B. Richardson, M.D July 1, 1916 Samuel A. Levine, M.D Nov. 1, 1916 Donald J. MacPherson, M.D Nov. 1, 1916

#### Associate in Medicine

July 1, 1915 . . . Marshall A. Welbourn, M.D. . . July 1, 1916

<sup>\*</sup> Served in another capacity previously. (See register of present members of the staff.)

# SURGICAL HOUSE OFFICERS

Service began Service completed
Nov. 1, 1913 Elliott C. Cutler, M.D Mar. 1, 1915
Nov. 1, 1913 Samuel H. Hurwitz, M.D Mar. 1, 1915
July 1, 1914 Stanley Cobb, M.D July 1, 1915
July 1, 1914 Edwin P. Lehman, M.D July 1, 1915
July 1, 1914 Marius N. Smith-Petersen, M.D Nov. 1, 1915
July 1, 1914 WILLIAM D. JACK, M.D Nov. 1, 1915
Nov. 1, 1914 Samuel C. Harvey, M.D. (Resigned) Nov. 1, 1915
Nov. 1, 1914 Julius B. Военм, M.D. (Resigned) . Nov. 1, 1915
Service will end
Nov. 1, 1915 Frank W. Marvin, M.D Mar. 1, 1916
Nov. 1, 1915 LeRoy N. Fleming, M.D Mar. 1, 1916
Mar. 1, 1915 George W. Van Gorder, M.D July 1, 1916
Mar. 1, 1915 HARRY W. WOODWARD, M.D July 1, 1916
July 1, 1915 James C. Janney, M.D Nov. 1, 1916
July 1, 1915 Merritt L. Jones, M.D Nov. 1, 1916
Nov. 1, 1915 WILLIAM S. McCANN, M.D Mar. 1, 1917
Nov. 1, 1915 James B. Montgomery, M.D Mar. 1, 1917
PATHOLOGICAL HOUSE OFFICER
July 1, 1914 James L. Stoddard, M.D July 1, 1915
Superintendent of Nurses and
Principal of the School of Nursing
Service began
July 1, 1912 Carrie M. Hall, R.N.
Assistant Superintendent of Nurses
Oct. 1, 1912 SALLY M. JOHNSON, R.N.
Instructor in Theory
Oct. 1, 1912 Susan A. Watson, R.N.
Instructor in Practice
June 12, 1915 Emmeline K. Mills, R.N.
Supervisor
Dec. 2, 1912 Leone N. Ivers, R.N.
Night Supervisor
Sept. 1, 1915 Annie I Sime, R.N.
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# OFFICERS OF THE INSTITUTION

Social Service Worker
Aug. 17, 1914 Alice M. Cheney, R.N.
Dietitian
Dec. 10, 1912 E: Grace McCullough
Apothecary
Dec. 2, 1912
Clerk
April 29, 1912 LIDA E. CRAWFORD
Housekeeper
Nov. 1, 1912 Elizabeth M. Packard
Chief Engineer

Oct. 21, 1911 . . . . . . . . John A. Aitken









